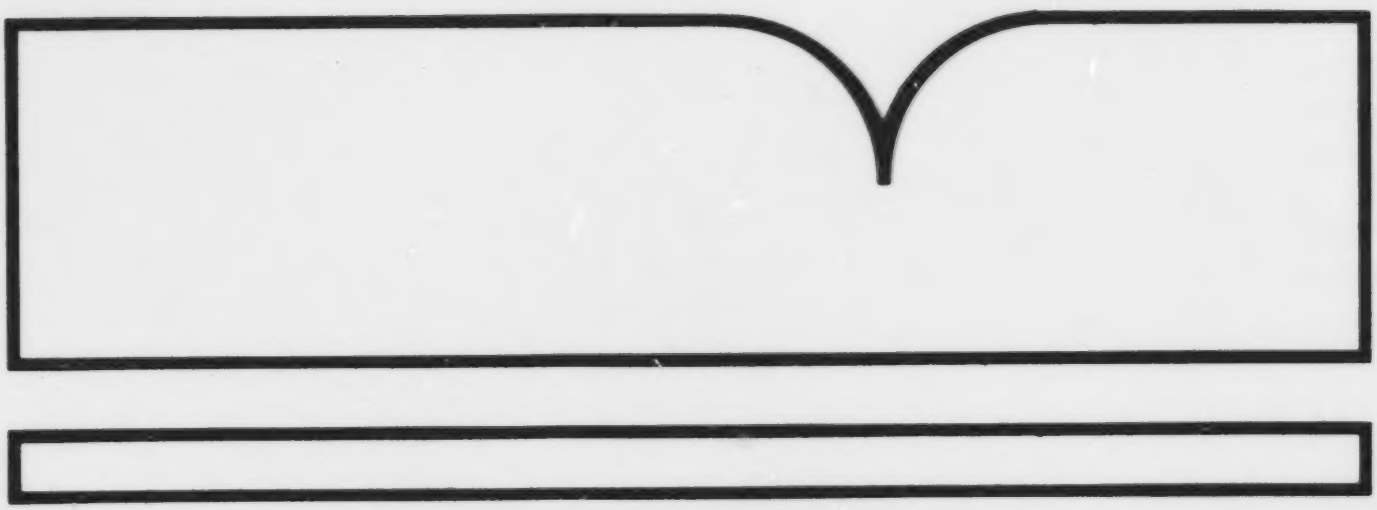
PB83-148486

# Needs Survey (1982): Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities

(U.S.) Environmental Protection Agency
Washington, DC

31 Dec 82



U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Water Program Operations
Washington DC 20460

430-9-82-009

PB83-148486

EPA

# 1982 Needs Survey

# Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA 22161

Prepared by:
Priority and Needs Assessment Branch (WH-595)
Facility Requirements Division
Office of Water Program Operations
U.S. Environmental Protection Agency
Washington, D.C. 20460

| TECHNICAL REPORT DATA<br>*(Please read Instructions on the reverse before completing)* | | |
|---|---|---|
| 1. REPORT NO.<br>430/9-82-009 | 2. | 3. RECIPIENT'S ACCESSION NO.<br>PB83 148486 |
| 4. TITLE AND SUBTITLE<br>1982 Needs Survey-Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities | | 5. REPORT DATE<br>Dec. 1982<br>6. PERFORMING ORGANIZATION CODE |
| 7. AUTHOR(S) | | 8. PERFORMING ORGANIZATION REPORT NO. |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS<br>Environmental Protection Agency<br>Facility Requirements Division<br>Office of Water Programs Operations<br>Washington, DC 20460 | | 10. PROGRAM ELEMENT NO.<br>2BG 647<br>11. CONTRACT/GRANT NO. |
| 12. SPONSORING AGENCY NAME AND ADDRESS<br>Environmental Protection Agency<br>Office of Water Programs Operations<br>Washington, DC 20460 | | 13. TYPE OF REPORT AND PERIOD COVERED<br>Technical Report<br>14. SPONSORING AGENCY CODE<br>700/02 |
| 15. SUPPLEMENTARY NOTES | | |

16. ABSTRACT

The 1982 Needs Survey has been completed in compliance with Sections 205(a) and 516(b)(1) of the Clean Water Act (CWO). It provides the best estimate available of the nationwide costs of compliance with the goals of the 1981 Construction Grant Amendments to the Act.

This survey modifies and updates the comprehensive cost estimates of the previous five surveys for constructing all grant-eligible municipal treatment works needed by existing and future populations.

| 17. KEY WORDS AND DOCUMENT ANALYSIS | | |
|---|---|---|
| a. DESCRIPTORS | b. IDENTIFIERS/OPEN ENDED TERMS | c. COSATI Field/Group |
| Clean Water | Needs survey | |
| 18. DISTRIBUTION STATEMENT | 19. SECURITY CLASS *(This Report)*<br>unclassified | 21. NO. OF PAGES<br>85 |
| | 20. SECURITY CLASS *(This page)*<br>unclassified | 22. PRICE |

EPA Form 2220-1 (Rev. 4-77) PREVIOUS EDITION IS OBSOLETE

# 1982 NEEDS SURVEY

## COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED WASTEWATER TREATMENT FACILITIES

December 31, 1982

TABLE OF CONTENTS


PAGE

Executive Summary

I. Introduction ..... 1

II. Explanation of the Survey ..... 3

III. Survey Results ..... 5

Table A - Backlog and Year 2000 Needs ..... 6
Table B - Year 2000 Needs Adjusted for Reserve Capacity Limitations ..... 8
Table C - Category V Estimate by Stream Use Objectives ..... 9
Table D - Category V Estimate by Cost Component ..... 10
Table E - Comparison of EPA and State Estimates for Year 2000. 11
Table F - 1982 Separate State Estimates ..... 12

IV. Federal Funding Potential ..... 13

Table G - Analysis of Federal Funding Potential for Conference Committee Proposal of 12/9/81 ..... 15
Table H - Current Analysis of Federal Funding Potential ..... 16

V. Comparison of Results: 1982 and 1980 Needs Surveys ..... 19

Table I - Comparison of 1982 and 1980 Needs Surveys ..... 20

VI. Quality of Facility Estimates: Categories I-V ..... 22

VII. Treatment and/or Control of Stormwaters: Category VI ..... 24

Table J - Category VI Estimate by Generic Stream Use Objectives ..... 24

VIII. Progress Towards a Water Quality Based Needs Survey ..... 25

IX. Summary and Conclusions ..... 26

Appendix A: How the Survey was Conducted ..... 28

I. Categories I-IV: Treatment Plants and Sewers ..... 28
II. Category V: Control of Combined Sewer Overflows ..... 32
III. Category VI: Control of Urban Stormwater Runoff ..... 38

Appendix B: Reasons for Separate State Estimates, Categories I-VI ..... 39

Appendix C: Summary Tables 1-43 ..... 40

## EXECUTIVE SUMMARY

- The 1982 Needs Survey has been completed in compliance with Sections 205(a) and 516(b)(1) of the Clean Water Act (CWA). It provides the best estimate available of the nationwide costs of compliance with the goals of the 1981 Construction Grant Amendments to the Act.

- This survey modifies and updates the comprehensive cost estimates of the previous five surveys for constructing all grant-eligible municipal treatment works needed by existing and future populations. It reaffirms that meeting the water quality goals of the CWA will require a substantial investment.

  - Backlog treatment and interceptor needs for existing populations are estimated at $35.4 billion; total existing and proposed treatment and interceptor needs, including growth to the year 2000, are estimated at $57.3 billion. The reserve capacity eligibility limitations as specified in the 1981 Construction Grant Amendments reduce this estimate by about $11.0 billion.

  - Overall, the total backlog needs for existing populations are $92.6 billion, 78.2 percent of the estimated needs for the year 2000 ($118.4 billion).

  - The $118.4 billion represents the total construction needs projected to the year 2000. It does not reflect either the eligibility limitations imposed by the 1981 Construction Grant Amendments or the total Federal funding potential based on the Federal share for these facilities.

- Advance work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and water quality impacts as part of the 1984 Needs Survey. Procedures have been developed and successfully tested to assess municipal water pollution abatement progress and to predict water quality and use improvements from meeting remaining treatment needs. These water quality initiatives of the 1982 Needs Survey are in response to the growing need to target limited construction grants dollars to facilities resulting in the greatest water quality and public health improvements and to the Congressional mandate of the 1981 Construction Grant Amendments for a Survey reflecting water quality needs.

- The costs reported by the 1980 Needs Survey have grown by about 15.5 percent on the average due to inflation. Absolute backlog needs and year 2000 needs have decreased by about 13.1 percent and 15.3 percent, respectively, since the 1980 Needs Survey. The most significant and measurable progress has been made in meeting treatment needs, which have decreased by 5.9 percent ($2.3 billion).

- The decrease in the magnitude of needs is due to a combination of grant awards, 11 ocean discharge waivers, 82 advanced treatment reviews, and modified estimation procedures for combined sewer overflow needs based on designated stream use. Changes in the level of needs are due also to enhanced survey procedures and estimating techniques.

- For the first time, the need for control and treatment of combined sewer overflows (CSO) was based on an estimate of the costs to achieve the State designated stream use classification rather than on an assumed recreation use for each CSO area. The current CSO estimate of $35.7 billion represents a 21 percent decrease from the 1980 level.

- About 16 percent of the national population is currently served by CSOs; 86 percent of the CSO population is in urbanized areas. The greatest CSO problem is limited to 12 States with CSO needs greater than $1 billion.

- The 1982 Needs Survey identified a total of more than 15,000 existing municipal treatment plants, including 1081 CSO facilities. About 83 percent of the nation is currently served by a collection system.

- The quality of the 1982 Needs Survey estimates has been greatly improved. They are based on enhanced procedures and better information from newly available facilities plans, discharge permits, the 1980 Census, and recent actual contract costs.

- The Needs Survey data and estimates have far reaching applications. They provide:

  - A basis for congressional allotment of funds appropriated for the construction grants program.

  - The only complete inventory of municipal treatment works.

  - A comprehensive technical and cost data base for management, programmatic, and technical analyses of the construction grants program.

- The 1982 Needs Survey includes a preliminary analysis of the future Federal share of treatment works cost (Federal funding potential). The future Federal funding potential is approximately $37.3 billion, which is essentially the same as the Agency estimate of $36.3 billion when the 1981 Construction Grant Amendments were enacted. It is based on phased/segmented facility data supplied by the States and on EPA assumptions concerning the timing of grant awards.

- EPA will provide a detailed report containing a complete list of marine areas with combined stormwater and sanitary sewer overflow problems and their estimated costs on March 1, 1983, as an addendum to the 1982 Needs Survey Report. The 1983 Appropriations Act includes $30 million for this separate marine CSO fund authorized at the $200 million. level by the 1981 Construction Grant Amendments. Tnis report is required by the Conference Report on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272) which appropriated funds for combined sewer overflow projects discharging into marine waters.

# COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED WASTEWATER TREATMENT FACILITIES

## 1982 NEEDS SURVEY

## I. INTRODUCTION

This report is submitted in compliance with sections 205(a) and 516(b)(1) of the Clean Water Act (CWA). Included are detailed estimates of the cost of constructing all needed publicly owned treatment works (POTWs) to meet the goals of the Act. These estimates include both backlog needs for current populations and projected needs for the year 2000 populations. This is the sixth Needs Survey since the enactment of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500). Previous surveys were conducted in 1973, 1974, 1976, 1978, and 1980. Cost estimates presented in previous Surveys have served as a basis for congressional allotment of funds appropriated for the construction grants program in accordance with the provisions of the Clean Water Act.

This Survey is restricted to publicly owned wastewater conveyance and treatment facilities, which include sewage treatment plants, sewers, and other types of related treatment facilities. Except for "individual" systems, privately owned facilities, even if intended to serve the general public, and federally owned facilities, such as military installations and national parks, are excluded. Costs for facilities constructed as publicly owned potable water treatment plants for the pretreatment, retention, or treatment of wastes from water purification processes are also ineligible under the financial assistance grant program established by the Clean Water Act and are, therefore, not included in this Survey.

Backlog and year 2000 needs are reported in six major categories, subdivided as follows:

| | | |
|---|---|---|
| Category I | - | Secondary Treatment; |
| Category IIA | - | Advanced Secondary Treatment (AST); |
| Category IIB | - | Advanced Treatment (AT); |
| Category IIIA | - | Infiltration/Inflow Correction; |
| Category IIIB | - | Major Sewer System Rehabilitation; |
| Category IVA | - | New Collectors and Appurtenances; |
| Category IVB | - | New Interceptors and Appurtenances; |
| Category V | - | Correction of Combined Sewer Overflows; |
| Category VI | - | Treatment and/or Control of Stormwaters. |

The basic approach for the 1982 Needs Survey was developed jointly by the Environmental Protection Agency (EPA) and an advisory group consisting of State and regional representatives. The Survey had five initial goals aimed at improving the needs estimating process. These were to:

- Secure nationally consistent estimates;
- Improve the overall quality of the estimates;
- Develop a detailed information base to assist in program planning and management;
- Update a national inventory of wastewater treatment facilities and combined sewer areas; and
- Provide a basis for the allotment of construction grant funds among the States.

EPA led the Needs Survey activity with all States participating in varying degrees, depending upon their resource priorities. This approach enabled the use of a single, nationwide methodology with uniform guidelines. The guidelines did, however, provide flexibility for cost estimate variations due to local conditions that affected construction costs.

Because of the major impact of the 1981 Construction Grant Amendments on the level of future Federal participation in the construction grants program, a new analysis of "Federal Funding Potential" has been added to this Survey. Federal participation in funding future municipal wastewater treatment needs is substantially altered by the Amendments. This report includes a preliminary analysis of Federal funding potential, including the timing, scope, and costs of future phased and segmented projects. The redefinition of secondary treatment, the limitations on reserve capacity eligibility, the review of proposed advanced wastewater treatment plants, approval of ocean discharge waivers under Section 301(h) of the Clean Water Act, and grant funding since the 1980 Needs Survey are also discussed in this report.

Work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and water quality impacts as part of the 1984 Needs Survey. Procedures have been developed and successfully tested to assess municipal water pollution abatement progress and to predict water quality and use improvements from meeting remaining treatment needs. These water quality initiatives of the 1982 Needs Survey are in response to the growing need to target limited construction grants dollars to facilities resulting in the greatest water quality and public health improvements and to the Congressional mandate of the 1981 Construction Grant Amendments for a Survey reflecting water quality needs. A complete discussion of these activites is found in Section VIII of this report.

On March 1, 1983, as an addendum to this Survey, EPA will provide a detailed report containing a complete list and estimated costs of marine areas with combined stormwater and sanitary sewer overflow problems. This addendum is required by the Conference Report (Amendment No. 29) on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272) which appropriated funds for combined sewer overflow projects discharging into marine waters.

## II. EXPLANATION OF THE SURVEY

### A. Cost Categories

The 1982 Needs Survey uses the same categories for construction cost estimates used in 1980. These categories are:

Category I - SECONDARY TREATMENT. This cost category covers facilities, including outfall sewers, needed to achieve secondary levels of treatment. Since the final regulations on the secondary treatment definition in the 1981 Construction Grant Amendments have not yet been issued, the 1982 Needs Survey is based on the existing secondary treatment definition.

Category IIA - ADVANCED SECONDARY TREATMENT (AST). This category includes incremental costs above secondary treatment needed to achieve advanced secondary levels of treatment. This requirement generally exists where water quality standards require a level of removal of conventional pollutants (biochemical oxygen demand (BOD) and suspended solids) greater than 85 percent or 30 milligrams per liter (mg/l) BOD, but less than 95 percent or 10 mg/l of BOD.

Category IIB - ADVANCED TREATMENT (AT). Incremental costs above those needed for AST are reported in this category for facilities that require advanced levels of treatment. This requirement generally exists where water quality standards require a higher degree of removal of such pollutants as carbonaceous and nitrogenous oxygen demands, phosphorus, ammonia, and nitrates. In addition, this requirement exists where removal requirements for conventional pollutants exceed 95 percent.

Category IIIA - CORRECTION OF INFILTRATION/INFLOW. Included in this category are costs for correction of sewer system infiltration/inflow problems. Costs are also reported here for preliminary sewer system analysis and for detailed sewer system evaluation surveys.

Category IIIB - MAJOR REHABILITATION OF SEWERS. This category includes cost estimates for replacement and/or major rehabilitation of existing sewer systems beyond those for correction of infiltration/ inflow. Costs are reported if the corrective actions are necessary to maintain the total integrity of the system. Major rehabilitation is considered to be extensive repair of existing sewers beyond the scope of normal maintenance programs, where sewers are collapsing or structurally unsound.

Category IVA - NEW COLLECTOR SEWERS. This category includes costs of construction of grant eligible new collector sewer systems and appurtenances designed to correct violations caused by raw discharges, and to protect public health from such things as malfunctioning septic tanks.

Category IVB - NEW INTERCEPTOR SEWERS. Included in this category are new interceptor sewers and transmission pumping stations necessary for conveying wastewaters from collector sewer systems to treatment facilities.

Category V - CONTROL OF COMBINED SEWER OVERFLOW (CSO). Costs reported in this category are for grant eligible facilities to prevent or control periodic bypassing of untreated wastes from combined sewers to achieve water quality objectives. This category does not include costs either for CSO control allocable to flood control or drainage improvement or for treatment or control of stormwaters in separate storm and drainage systems.

Category VI - CONTROL OF STORMWATER RUNOFF. This category includes costs of abating pollution in urbanized areas from stormwater runoff channeled through sewers and other conveyances used only for such runoff. These facilities are not grant eligible.

The incremental costs for removal of toxic pollutants are not included in the Needs Survey.

## B. How the Survey was Conducted

Appendix A explains how the Survey was conducted.

## C. Basis of Cost Estimates

All costs are estimated in January 1982 dollars. Cost estimates are provided for two periods of time. The estimate for backlog needs addresses costs of providing treatment service to the 1980 population for abatement of existing pollution problems. In contrast, the estimate for the year 2000 addresses treatment needs, including those of new growth areas, for the projected population of the year 2000.

D. Population

The Needs Survey figures are based on present and future population estimates. The present population is defined as the population of the United States as estimated by the 1980 Census. The future or projected population is based on Bureau of Economic Analysis (BEA) projections for the year 2000. Population estimates and projections are used as State population ceilings for Needs Survey purposes.

E. Indirect Industrial Treatment

Estimates of municipal wastewater treatment needs include the existing industrial flow received by the municipal treatment plant. Future indirect industrial flows are also included in the estimates of the year 2000 needs if they are adequately documented.

## III. SURVEY RESULTS

The 1982 Needs Survey focuses for the first time on backlog needs for present populations. In past surveys, the emphasis has always been directed toward needs for the year 2000. This change of focus reflects the objective of the 1981 Construction Grant Amendments to target construction grants dollars to existing treatment and conveyance needs. More specifically, the amendments call for limiting reserve capacity eligibilities to more closely approximate existing needs and for adding backlog needs as a factor in the allotment formula for construction grants appropriations. However, the Year 2000 needs are still included as an integral part of this report.

A. Assessment of Backlog and Year 2000 Needs

The results of the 1982 Needs Survey for backlog and year 2000 needs are shown in the following tables (A through F).

Table A

Backlog And Year 2000 Needs
(January 1982 Dollars, In Billions)

| Needs Category | Backlog Estimate | Year 2000 EPA Assessment | Difference | Percent Difference |
|---|---|---|---|---|
| I (Secondary Treatment) | 20.13 | 31.13 | 11.00 | 54.6% |
| IIA (Advanced Secondary) | 3.25 | 4.87 | 1.62 | 49.9% |
| IIB (Advanced Treatment) | 0.53 | 0.87 | 0.34 | 64.2% |
| IIIA (Infiltration/Inflow) | 2.56 | 2.56 | 0 | 0 |
| IIIB (Replacement and/or Rehab.) | 4.69 | 4.69 | 0 | 0 |
| IVA (New Collector Sewers) | 16.77 | 20.66 | 3.89 | 23.2% |
| IVB (New Interceptor Sewers) | 8.93 | 17.83 | 8.90 | 99.7% |
| V (Combined Sewer Overflows) | 35.74 | 35.74 | 0 | 0 |
| Total Treatment (I, II) | 23.91 | 36.87 | 12.96 | 54.2% |
| Total I, II, IIIA, IVB | 35.40 | 57.26 | 21.86 | 61.8% |
| Total I-V | 92.60 | 118.35 | 25.75 | 27.8% |

Note: This table does not account for grant eligibility restrictions for statutory requirements regarding reserve capacity as specified in the 1981 Construction Grant Amendments.

As shown in Table A, backlog needs for Categories I-V are estimated at $92.60 billion, 78.2 percent of the year 2000 needs. Because estimated needs for Category IIIA (infiltration/inflow correction) and Category IIIB (major sewer rehabilitation) are for correcting and repairing existing facilities, they are exclusively backlog needs. Similarly, because combined sewer systems are no longer built, all Category V needs are reported as backlog needs.

The costs reported for backlog needs are sufficient only to build facilities needed to serve the 1980 population. These costs exclude reserve capacity to serve population growth beyond 1980. Backlog needs estimates also exclude treatment plants and sewers not needed in 1980 but projected to be needed for year 2000 populations.

Total backlog treatment needs (Categories I, IIA and IIB) are $23.9 billion, 64.8 percent of year 2000 estimated needs. Total backlog needs for Categories IIIA and IVB (I/I Correction and New Interceptor Sewers) are $11.5 billion, 56.4 percent of the year 2000 estimate. Appendix C, Tables 1 through 15, provides detailed estimates of backlog needs; Tables 21 through 31 provide detailed year 2000 needs.

The EPA assessment of the dollar need for construction of municipal wastewater treatment facilities to serve year 2000 populations is $118.4 billion in Categories I through V. Included in the year 2000 needs assessment is $57.3 billion for treatment plants and interceptors (Categories I, II, IIIA, and IVB). Needs for treatment plants alone are $36.9 billion. Of the treatment need $31.1 billion (84.3 percent) is required to achieve secondary treatment, and $5.8 billion (15.7 percent) is for treatment levels higher than secondary.

The differences between backlog and year 2000 needs are substantial for two reasons. The first is a projected 21.3 percent population increase from the present 230 million persons to the year 2000 population projection of 279 million. The second is an increase in percentage of population projected to be served by municipal facilities, from the present 71 percent to the year 2000 figure of 92 percent.

The year 2000 needs reported in Table A for Categories I (Secondary Treatment), IIA (Advanced Secondary), IIB, (Advanced Treatment), and IVB (New Interceptor Sewers) do not reflect the limitations on reserve capacity imposed by the 1981 Construction Grant Amendments. The reported needs currently include all projected reserve capacity to the year 2000. The Amendments limit Federal funding of reserve capacity after October 1, 1984, to the capacity for meeting existing needs as of the date of approval of Step 3 grant award, and in no case beyond the capactiy for needs that exist as of October 1, 1990. A preliminary national estimate of the impact of these limitations is shown in Table B, as follows:

Table B

Year 2000 Needs Adjusted for
Reserve Capacity
Limitations
(1982 Dollars, in Billions)

| Needs Category | Year 2000 Needs Without Res. Cap. Limit. | Estimated Ineligible Due to Res. Cap. Limit. | Revised Year 2000 Needs with Res. Cap. Limit. | 1982 Backlog Needs |
|---|---|---|---|---|
| I (Sec. Treat) | $ 31.13 | $ 6.07 | $ 25.06 | $ 20.13 |
| IIA (Adv. Sec.) | 4.87 | 0.88 | 3.99 | 3.25 |
| IIB (Adv. Treat) | 0.87 | 0.14 | 0.73 | 0.53 |
| IVB (New Interceptor Sewers) | 17.83 | 3.99 | 13.84 | 8.93 |
| Subtotal | $ 54.70 | $ 11.08 | $ 43.62 | $32.84 |

The above EPA estimates of reduced eligibilities due to reserve capacity limitations have not had the benefit of State involvement and must be considered preliminary, although these national totals reflect the approximate overall impact of the limitations. The preliminary estimates are based on facility data supplied by the States and on EPA assumptions about the timing of grant awards and associated reserve capacities. EPA will be working closely with the States to refine these estimates on a State-by-State basis, and enhanced estimates of eligible categories I, IIA, IIB, and IVB needs will be provided in the 1984 Needs Survey.

In this Survey, the Category V backlog needs are reported as one composite estimate. This is a departure from previous surveys which provided only a range of Category V estimates for optional levels of control. The 1982 estimate represents the cost of CSO controls required to maintain the State designated stream use classification. This estimate was developed in four steps: (1) identification of the water body segment receiving the CSO; (2) identification of the State designated stream use classification for the segment; (3) matching of each State stream use to a generic stream use; and (4) estimation of the level of CSO control needed to maintain the stream use. This automated CSO needs estimation process was not used when an acceptable facility plan was available or when sewer separation was more cost effective than other control measures.

The total Category V estimate of $35.7 billion is disaggregated into general classes of stream use objectives (Table C) and into cost components (Table D) as follows:

Table C

Category V Estimate by Stream Use Objectives
(January 1982 Dollars, in Billions)

| Level of Control | Generic Stream Use | Need | Percent of Total |
|---|---|---|---|
| Aesthetics | Navigation<br>Agricultural Water Supply<br>Industrial Water Supply | $ 0.23 | 0.6% |
| Public Health | Domestic Water Supply<br>Partial Body Contact Recreation<br>Noncontact Recreation | 1.85 | 5.2% |
| Fish and Wildlife | Warmwater Fisheries<br>Coldwater Fisheries<br>General Fish and Wildlife | 12.82 | 35.9% |
| Recreation | General Recreation<br>Full Body Contact Recreation<br>Shellfish Protection | 17.33 | 48.5% |
| Other * | | 3.51 | 9.8% |
| Total | | $35.74 | 100.0% |

* Includes needs estimates for cost effective sewer separation ($2.0 B) and facility plans ($1.50 B). These estimates are not directly related to a level of control needed to protect receiving water uses.

Table D

Category V Estimate by Cost Component
(January 1982 Dollars, in Billions)

| Cost Component | Need | Percent of Total |
|---|---|---|
| Wet Weather Interceptors | $ 9.2 | 25.8% |
| Storage Facilities | 14.5 | 40.6% |
| Treatment Facilities | 8.5 | 23.8% |
| Other * | 3.5 | 9.8% |
| Total | $35.7 | 100.0% |

* Other includes facility plan estimates ($1.5 B), sewer separation ($2.0B), and sewer flushing ($0.03 B).

B. Separate State Estimates for Year 2000 Needs

After EPA formulated the cost estimates, the States were asked either to concur with these estimates or to provide additional data to support differing costs. In many cases these data were supplied and the EPA assessments were modified to reflect the changes. In some instances, however, differences in EPA and State cost estimates were irreconcilable. In these few cases, State participants provided an independent State estimate of need (Appendix C, Table 22).

The reasons for differing cost estimates were, in general, not associated with construction costs themselves but with some States' beliefs that national survey guidelines should be amended and/or adjusted to more accurately reflect local conditions or needs. The differences in needs estimates between EPA and States are listed in Table E, as follows:

Table E

Comparison of EPA and State Estimates
for Year 2000
(January 1982 Dollars, in Billions)

| Needs Category | | EPA Estimate | State Estimate | Difference | Percent Difference |
|---|---|---|---|---|---|
| I | Secondary Treatment | $31.13 | $31.14 | 0.01 | 0 |
| IIA | Incremental Costs above Secondary to Achieve Advanced Secondary Levels (AST) | 4.87 | 4.87 | 0 | 0 |
| IIB | Incremental Costs above AST to Achieve Advanced Treatment Levels (AT) | 0.87 | 0.87 | 0 | 0 |
| IIIA | Infiltration/Inflow | 2.56 | 2.70 | 0.14 | 5.5% |
| IIIB | Replacement and/or Rehabilitation | 4.69 | 4.69 | 0 | 0 |
| IVA | New Collector Sewers | 20.66 | 20.66 | 0 | 0 |
| IVB | New Interceptor Sewers | 17.83 | 17.83 | 0 | 0 |
| V | Combined Sewer Overflows | 35.74 | 35.60 | -0.14 | -0.4% |
| Total | I & II (Treatment) | $ 36.87 | $ 36.88 | 0.01 | 0 |
| Total | I, II, IIIA, IVB | $ 57.26 | $ 57.41 | 0.15 | 0.3% |
| Total | I-V | $118.35 | $118.36 | 0.01 | 0.01% |

Table 21 (Appendix C) shows the number of individual cost estimates made by EPA for each State in Categories I-IV that resulted in a need. Of the more than 463,000 separate potential cost estimates investigated by EPA, only 41 independent estimates (0.008 percent) were submitted by the States. Table 41 (Appendix C) shows the number of separate State estimates submitted in Categories I-IV by category of need. The separate State estimates for year 2000 and backlog needs are shown in Table F, as follows:

Table F

1982 Separate State Estimates
(1982 Dollars, in Millions)

| State | Year 2000 Need | 1982 Survey Backlog | Affected Category |
|---|---|---|---|
| California | $139 M | $139 M | IIIA |
| | -139 M | -139 M | V |
| Texas | 7 M | 11 M | I, IVB |
| Total | $ 7 M | $ 11 M | |

California's estimate reflects disagreement on whether needs estimates for one proposed project should be reported in the combined sewer overflow correction or the separate sewer rehabilitation categories. Texas has separate State estimates for 30 projects. EPA could not accept these estimates because of inadequate documentation. All other States and Territories reported no independent State estimates.

C. Costs of Plants Requiring Treatment More Stringent than Secondary (Category II)

The estimated cost to upgrade all facilities to secondary treatment levels is $31.1 billion (Category I). Secondary treatment facilities represent 85 percent of the treatment projects and 84 percent of the total treatment dollar needs.

Category II cost estimates consist of incremental costs above secondary for each treatment facility where required treatment levels are higher than secondary. Total advanced treatment costs are split as follows:

- Costs to upgrade Category I facilities from secondary levels to advanced secondary levels where required (Category IIA). Advanced secondary levels are achieved in general when effluent limits for BOD are between 30 and 10 mg/l (85-95 percent removal). These costs are estimated at $4.9 billion (13 percent of total treatment dollar needs and 13 percent of all treatment projects.

- Costs to raise Category IIA facilities from advanced secondary levels to advanced treatment levels (AT) where required. Advanced treatment is defined as removal of BOD above 95 percent (less than 10 mg/l) or nitrogen removal requirements. The estimate for AT costs is $0.9 billion (3 percent of total treatment dollar needs and 2 percent of all treatment projects).

## IV. FEDERAL FUNDING POTENTIAL

### A. Statutory Requirements

The 1981 Construction Grant Amendments substantially alter the level of future Federal participation in grant awards to municipal wastewater treatment works. A summary of the pertinent changes affecting Federal grant funding follows:

#### Reserve Capacity

- Total planned levels of reserve capacity are eligible for funding if an applicant receives a Step 3 grant (single, segmented or phased) for a Category I, II, or IVB project before October 1, 1984.

- Beginning October 1, 1984, only the capacity designed to serve residential, commercial, and industrial flows that exist on the date of approval of a Step 3 grant for a single, segmented, or phased Category I, II or IVB project will be eligible for Federal assistance. If a phase or a segment of the facility for a Category I, II, or IVB project received a Step 3 grant before October 1, 1984, the total planned levels of reserve capacity are eligible for funding.

- In no event shall eligible capacity be in excess of needs that exist on October 1, 1990.

#### Federal Share

- For any Step 3 construction grant approved prior to October 1, 1984, the Federal share would be 75 percent. Where any segmented or phased Step 3 grant in needs categories I, II, IIIA, and IVB is approved prior to October 1, 1984, subsequent grants for that facility would also be 75 percent.

- For any Step 3 construction grant approved after October 1, 1984, the Federal share would be 55 percent. Where a facility had received an initial Step 3 grant before that date, subsequent grants for that facility would remain at 75 percent.

- The Governor of a State, with the concurrence of the EPA Administrator, may modify the Federal share to a lower percentage rate uniform throughout the State.

- The amount of any grant made after September 30, 1981, for any treatment facilities utilizing innovative or alternative wastewater treatment processes and techniques would be 20 percent greater than the uniform rate, but in no event greater than 85 percent of the cost of construction.

Eligible Categories

- o All categories (I-V) of treatment, storage, and conveyance are grant eligible until October 1, 1984.

- o Only secondary and advanced waste treatment, correction of infiltration/inflow, and interceptor sewers (Categories I, II, IIIA, IVB) will be eligible on or after October 1, 1984, except for those works funded by a Governor's discretionary allowance.

Discretionary Funds

- o Beginning October 1, 1984, a Governor will have discretion to use up to 20 percent of a State's allotment for categories other than I, II, IIIA, and IVB.

Combined Sewer Overflows (CSO)

- o After October 1, 1984, a Governor may request a Step 3 grant out of the State's regular allotment at the prevailing Federal share where correction of CSO is a major State priority.

- o After October 1, 1982, $200 million annually is authorized for correction of CSO discharges into marine bays and estuaries. Thirty million dollars has been appropriated for Fiscal Year 1983.

B. Preliminary Assessment Based on 1980 Estimated Needs

An early attempt was made to calculate the Federal funding potential based on the December 9, 1981, Conference Committee proposal prior to the enactment of the 1981 Amendments. At that time the estimate of Federal funding potential based on 1980 Needs Survey data was $36.3 billion for the proposed eligible categories, including $0.8 billion for the separate marine CSO fund. The breakdown of that projection is as follows (Table G):

Table G

Analysis Of Federal Funding Potential for
Conference Committee Proposal of 12/9/81
(In $ Billions)

| | Federal Funding Potential | Eligible Costs |
|---|---|---|
| FY 82/83/84 | | |
| Segmented Grants (75%) | $ 3.4 | $ 4.5 |
| Nonsegmented (75%) | 3.3 | 4.4 |
| FY 82/83/84 Subtotal | $ 6.7 | $ 8.9 |
| After FY 84 | | |
| Segmented Grants (75%) | $ 3.9 | $ 5.2 |
| Nonsegmented (55%) | 24.9 | 45.5 |
| After FY 84 Subtotal | $28.8 | $50.7 |
| Total Construction Grants Program | $35.5 | $59.6 |
| Marine CSO Fund @ $200 M/yr. for 4 years | 0.8 | 1.4 |
| Total Federal Funding Potential | $36.3 | $61.0 |

C. Current Assessment Based on 1982 Estimated Needs

The current projection of Federal funding potential based on the 198? Construction Grant Amendments and 1982 Needs Survey data is shown in Table H, as follows:

Table H

Current Analysis of Federal Funding Potential
(In $ Billions)

| | Federal Funding Potential | Eligible Costs |
|---|---|---|
| FY 82/83/84 | | |
| Segmented Grants (75%) | $ 4.7 | $ 6.2 |
| Nonsegmented (75%) | 1.8 | 2.4 |
| FY 82/83/84 Subtotal | $ 6.5 | $ 8.6 |
| After FY 84 | | |
| Segmented Grants (75%) | $ 9.3 | $12.4 |
| Nonsegmented (55%) | 20.9 | 38.0 |
| After FY 84 Subtotal | $30.2 | $50.4 |
| Total Construction Grants Program | $36.7 | $59.0 |
| Marine CSO Fund @ $200 M/yr. for 4 years ($30 M. appropriated for 1983) | 0.6 | 1.4 |
| Total Federal Funding Potential | $37.3 | $60.4 |

This analysis of Federal funding potential, using 1982 Needs Survey data and a phased/segmented project list submitted by the States, reflects the following assumptions:

1. Project startup dates in the 1982 Needs Survey data or grant award dates in the phased/segmented list were used to determine the projected award date for each project.

2. Eligible costs were obtained from the 1982 Needs Survey data file. Eligible Category V costs were estimated at $5 billion. The total CSO needs are reduced to reflect the findings of recent site-specific studies which limit CSO controls to those that will result in significant improvement of water uses.

3. Eligible reserve capacities for treatment facilities and interceptor sewer systems were determined from the 1982 Needs Survey data as follows:

a. Wastewater Treatment Plants:

(1) Step 3 funded before 10/1/84: used the difference between the year 2000 plant design capacity and present design capacity;

(2) Step 3 funded between 10/1/84 and 9/30/90: prorated the difference between the year 2000 plant design capacity and present design capacity to the year of projected grant award;

(3) Step 3 funded on and after 10/1/90: used 50 percent of the difference between the year 2000 plant design capacity and present design capacity.

b. Interceptor Sewers:

(1) If the present design flow and the future design flow were available, the eligible reserve capacity was calculated as described for wastewater treatment plants.

(2) If survey forms omitted present flow and future design flow, the present population and the future population were used to calculate the reserve capacity, based on the rules described for wastewater treatment plants. Present flow is the product of present population multiplied by assigned per capita flow. Future design flow is the product of future population multiplied by assigned per capita flow. Assigned per capita flows are listed as follows:

Non-SMSA Areas:

Population larger than 10,000:

Assigned per capita flow = 115 gallons per capita per day (gpcd).

Population equal to or less than 10,000 but larger than 5,000:

Assigned per capita flow = 105 gpcd.

Population equal to or less than 5,000:

Assigned per capita flow = 95 gpcd.

SMSA Areas:

Assigned per capita flow = 115 gpcd.

4. Analysis assumes all States use 20 percent of funds each year after October 1, 1984, to fund otherwise ineligible costs.

5. Step I and Step II costs were not included.

6. Since future innovative/alternative projects could not be identified at this time, their increased Federal share was not considered in this estimate.

7. The Federal share was calculated according to the provisions of the 1981 Construction Grant Amendments.

D. Comparison of Preliminary and Current Estimates

The figures shown in Table G and Table H are comparable with minor variances. The major causes of the variances are:

1. Table G (preliminary estimate) is based on 1980 Needs Survey data; Table H (current estimate) is based on 1982 Needs Survey data.

2. Table H is based in part on the phased/segmented project analysis provided by the States. The eligible costs provided by the States are substantially larger in many cases than those derived from the 1980 Needs Survey data. Consequently, Federal funding potential for segmented projects in Table H is substantially larger than for those of Table G.

3. Backlog and year 2000 needs in the 1982 Needs Survey are smaller than those in the 1980 Needs Survey. The total eligible cost for Categories I, II and IVB is $63.7 billion for the 1980 Needs Survey and $54.7 billion for the 1982 Needs Survey.

4. In the 1982 Needs Survey, 67 percent of the FY 82-84 funding goes to phased/segmented projects for Categories I, II and IVB, while only 50 percent of the FY 82-84 funding went to phased/segmented projects for Categories I, II and IVB in the 1980 Needs Survey.

5. The dollar amount of remaining phased/segmented needs for Categories I, II and IVB is larger in the analysis of the 1982 Needs Survey data than that obtained from the 1980 Needs Survey data:

1980
Total eligible cost: $5.2 billion
with $3.9 billion grant share.

1982
Total eligible cost: $12.4 billion
with $9.3 billion grant share.

6. Different funding patterns by category were assumed for FY 82-84:

| | Categories I, II and IVB | CSO | I/I | Other |
|---|---|---|---|---|
| 1980 Needs Survey | 70% | 16% | 2% | 12% |
| 1982 Needs Survey | 86% | 2% | 3% | 9% |

E. Federal Funding Potential Qualifications

The 1982 Needs Survey includes an assessment of separate data submitted by the States on facilities projected to be funded in phases or segments, along with a preliminary analysis of the basic provisions that affect Federal funding: reserve capacity, Federal share, eligible categories, Governor's discretionary fund, combined sewer overflow funding, funding authorization, and the allotment formula for fund distribution. The estimate of Federal funding potential from the combined 1982 Needs Survey data file and phased/segmented project list was used to assess the potential Federal financial obligation due to the 1981 Amendments of the Clean Water Act. This analysis and its results, however, are considered preliminary because of the various interpretations of the definition of phased/segmented projects by the States and the EPA Regions. The final construction grant regulations will clarify the definition of "phased/segmented projects" and establish criteria for funding new phased or segmented projects, based on the legislative history of the 1981 Construction Grant Amendments. The Administrator will review all grants for new phased or segmented projects before the construction grant is awarded to ensure compliance with these criteria. The 1984 Needs Survey will refine the "phased/segmented project list" and the estimate of Federal funding potential.

## V. COMPARISON OF RESULTS: 1982 and 1980 NEEDS SURVEYS

Table I shows the 1982 Needs Survey results compared with the 1980 Survey. The results of the two Surveys are consistent when the grants awarded in the period 1980-1982 and the inflation of construction costs experienced between surveys are taken into account.

Table I

Comparison Of The 1982 and 1980 Needs Surveys
Year 2000 Needs
(1982 Dollars, in Billions)

| Category | 1980 Survey | 1982 Survey | Difference | Needs Met By Grant Awards |
|---|---|---|---|---|
| I & II (Treatment) | $39.3 | $36.9 | $-2.4 | $6.3 |
| IIIA | 2.9 | 2.6 | -0.3 | 0.2 |
| IIIB | 6.8 | 4.7 | -2.1 | 0.5 |
| IVA | 21.1 | 20.7 | -0.4 | 0.8 |
| IVB | 24.4 | 17.8 | -6.6 | 1.5 |
| V | 45.2 | 35.7 | -9.5 | 0.3 |
| Total I, II, IIIA and IVB | $66.6 | $57.3 | $-9.3 | $8.0 |
| Total I-V | $139.7 | $118.4 | $-21.3 | $9.6 |

Reasons for changes in year 2000 needs:

1. Quantified changes:

   a. Grant awards since 1980 Needs Survey satisfied $9.6 billion of needs.

   b. $0.7 billion of needs were met by the approval of ocean discharge waivers.

   c. $0.3 billion of needs were met as a result of advanced treatment review.

2. Nonquantified changes:

   a. The completion of a national facilities inventory for the 1982 Survey resulted in the addition of more than 300 facilities, most of them very small and located in rural areas.

   b. The year 2000 population ceiling has increased for several States.

   c. Facility cost estimates have been enhanced based on facility plans.

   d. Estimating procedures for interceptor lengths, sewer costs, and treatment cost curves have been updated.

e. CSO needs estimation procedures now address State designated stream use classifications. In addition, more facility plans were used in the estimating process.

Under Section 301(h) of the Clean Water Act, municipal treatment facilities discharging to marine waters are eligible to apply for waivers of the secondary treatment standard. As of September 15, 1982, EPA had approved 11 ocean discharge waivers and denied two applications. The reduction in Category I need from the approval of these 11 applications is approximately $0.7 billion. EPA is currently reviewing 17 additional applications and expects to review several hundred more in FY 83 and thereafter. The 1984 Needs Survey will reflect the effects of decisions on these applications.

Section 304(d)(4) of the Clean Water Act redefines secondary treatment as follows:

> "For the purposes of this subsection, such biological treatment facilities as oxidation ponds, lagoons, and ditches and trickling filters shall be deemed the equivalent of secondary treatment. The Administrator shall provide guidance under paragraph (1) of this subsection on design criteria for such facilities, taking into account pollutant removal efficiencies and, consistent with the objectives of the Act, assuring that water quality will not be adversely affected by deeming such facilities as the equivalent of secondary treatment."

EPA is preparing amendments to 40 CFR Part 133 to implement this new statutory requirement. The potential cost savings from the above changes cannot be assessed until final regulations are published. The 1984 Needs Survey will reflect the secondary treatment cost savings.

The results of the EPA review of advanced treatment (AT) projects were incorporated in the estimate of Category I and II needs. EPA, as directed by Congress, reviews advanced treatment projects designed to meet effluent standards more stringent than secondary, and with incremental costs of $3 million or more beyond secondary, to ensure all such projects will result in significant water quality and public health improvements. Regional offices review advanced treatment projects with incremental costs less than $3 million.

The advanced treatment reviews completed to date have resulted in deferring or reducing the capacity of AT processes for some projects. The cost estimates of the affected projects are thus reduced. The overall impact of the AT reviews on the 1982 Needs Survey is a reduction in needs estimates totaling $0.3 billion.

The 1982 Category V needs are 21 percent less than those estimated in the 1980 Needs Survey, after adjustment for construction cost increases since January 1, 1980. The reported costs are more realistic than those reported in 1980. The primary reasons are the changes in the needs estimating procedure and the use of approved facility plan estimates.

The CSO needs estimating procedure was modified in several ways. For the first time the estimation of needs was based on the required CSO controls to maintain the State designated stream use classifications linked to receiving stream segments. Also, this survey includes the cost estimates of modification or expansion of existing dry-weather treatment plants where such an approach was found to be cost effective. Only the costs of separate wet weather facilities were reported in the 1978 and 1980 surveys. A more detailed explanation of the 1982 needs estimating procedure can be found in Appendix A.

Acceptable CSO facility plans provided the basis for 26 CSO areas (2.4 percent of the nation). The resultant $1.5 billion in needs is 4.2 percent of the 1982 Category V estimate. The 1980 estimate included facility plan estimates for Chicago and San Francisco only. The remainder of the 1982 CSO estimate was based on the needs estimating model.

EPA corrected and completed an inventory of combined sewer areas in the 1982 Needs Survey. The reported combined sewer acreage increased by 8 percent to 2.8 million acres as a result. Overall population served by combined sewers increased by 2 percent to about 43.2 million people because previously undetected combined sewer service areas in the New York metropolitan area were identified.

The revised inventory comprises 1,081 CSO facilities, 337 (31 percent) of which are in urbanized areas representing about 73 percent of the national CSO area, 86 percent of the national CSO population, and 73 percent of the nationwide 1982 CSO need.

## VI. QUALITY OF FACILITY ESTIMATES: CATEGORIES I-V

The quality of cost estimates in this Survey has improved over earlier surveys because of the upgraded quality of technical data supporting the costs.

The reliability of cost estimates depends upon many factors. Highly accurate cost data can be obtained only if treatment facilities have been planned and designed adequately to meet projected water quality requirements. EPA studied a large number of wastewater treatment plants that used a variety of treatment technologies. Using these data, EPA developed cost estimating procedures which were used in the cost estimating process when better quality data were not available. Actual recent cost experience in sewer construction and installation was studied as well. EPA also developed cost estimating procedures and rules of thumb for pipe costs when better data were not available. Approximately 29 percent of the facilities were estimated by EPA cost curves.

Differences in local construction costs were recognized by establishing two cost multipliers for each of 30 areas of the United States. One multiplier was used for estimating treatment costs and the other for sewer costs.

The cost estimates for Categories I, II, and IVB (treatment plants and interceptors) are considered most accurate because of the extensive construction cost data collected for these facilities. The cost estimates for Categories IIIA, IIIB, and V (infiltration/inflow, rehabilitation and combined sewer overflow), while improved, are not as accurate as those for the other categories.

Numerous infiltration/inflow studies and rules of thumb based on experience to date have resulted in a substantial improvement in the Category IIIA estimates. EPA accepted need estimates for infiltration/inflow correction only when the estimates could be documented by facility plans or by engineering studies. In some cases costs of correction of infiltration/inflow can be traded off against treatment costs.

The estimated repair cost of sewers (Category IIIB) is uncertain because many sewers cannot be routinely inspected. Thus, the nature and magnitude of sewer structural deficiencies are unknown until actual sewer collapse, a relatively common event in older cities. The need for this category resulted mainly from both operation and maintenance deficiencies and the many sewer systems that have already exceeded their expected physical lives of 50 to 100 years.

Category IVA (new collector sewers) cost estimates have improved since 1980. The quality of estimates in this category depends partly on assumptions concerning 1972 and future populations. Category IVA needs were limited to include provision for future populations of up to 1.5 times the 1972 population requiring new sewers, as required by the construction grants regulations. The blanket use of the 1.5 factor results in a somewhat high estimate of eligible collector sewer costs because it may allow, in some cases, for ineligible sewering of vacant lots. Careful and detailed analysis of local conditions as required in the facility planning process would likely reduce the estimated cost of collector sewers eligible for construction grants below the estimate reported in the 1982 Needs Survey. For this reason the year 2000 estimates in Category IVA are still considered high, while the backlog estimates in this category are considered to be a more accurate but slightly understated assessment of national need.

Category V (Control of Combined Sewer Overflow) estimates are imprecise and difficult to develop because of variations in the size, number and frequency of combined sewer overflows, characteristics of the receiving waters, and uncertain and difficult to evaluate water quality and water use effects of CSO pollution control measures. In many cases the shortcoming of the combined sewer area inventory is that important physical data about local conditions, such as the number and location of overflow points and receiving water characteristics, are not available in national studies or data files. As a result a modeling approach for these cases was based on data collected and analyzed for 15 cities in the

United States selected for their diverse wet weather conditions and data availability. The results of these site studies were used to develop the model parameters. These results, therefore, are not precise for individual cities although the overall State and national estimates are considered realistic.

## VII. TREATMENT AND/OR CONTROL OF STORMWATERS: CATEGORY VI

This survey includes cost estimates for treating or controlling pollution from separate storm sewers even though stormwater pollution control facilities are not eligible for Federal grants. This additional cost category (Category VI) includes the costs of abating pollution in the urbanized areas from stormwater runoff channeled through sewers and other conveyances used only for such runoff. The costs of abating pollution from stormwater channeled through combined sewers are included in Category V.

The 1982 national stormwater treatment need to maintain the State designated stream uses is estimated at $93.21 billion. The 1982 estimate is 32.6 percent less than the 1980 estimate to meet recreation use ($138.38B in 1982 dollars).

Unlike previous surveys, the 1982 Survey presents Category VI estimates as one composite cost for stormwater treatment required to maintain the State designated stream use classifications linked to urbanized areas. Table J presents the 1982 estimate by stream use classification.

Table J

Category VI Estimate by Generic Stream Use Objectives
(January 1982 Dollars, in Billions)

| Level of Control | Generic Stream Use | Need | Percent of Total |
|---|---|---|---|
| Aestnetics | Navigation<br>Agricultural Water Supply<br>Industrial Water Supply | $ 0.04 | 1% |
| Public Health | Domestic Water Supply<br>Partial Body Contact Recreation<br>Noncontact Recreation | 3.60 | 3% |
| Fish and Wildlife | Warmwater Fisheries<br>Coldwater Fisheries<br>General Fish and Wildlife | 19.61 | 21% |
| Recreation | General Recreation<br>Full Body Contact Recreation<br>Shellfish Protection | 69.96 | 75% |
| Total | | $93.21 | 100% |

The cost estimates for control of stormwater pollution vary greatly depending upon how the problem is approached. Category VI cost estimating methods are based on a uniform methodology similar to that used to estimate CSO needs. However, the Category VI estimate is less precise because data were not available during the 1982 Needs Survey to verify the methodology for stormwater treatment and control.

## VIII. PROGRESS TOWARDS A WATER-QUALITY BASED NEEDS SURVEY

Historically, the Needs Survey has been oriented toward administrative and program overview matters related to estimating costs of municipal treatment construction needed to comply with the enforceable requirements of the Clean Water Act and to abate pollution from combined sewer overflows. This focus reflects the joint efforts of EPA, the States, and local authorities to satisfy a congressional mandate. However, in response to growing interest in targeting limited municipal construction dollars to facilities that result in the greatest water quality and public health improvements, the 1984 Needs Survey is being planned to assess water quality and related water use effects of needed municipal facilities.

Although not implemented in the 1982 Survey, a prototype system was developed to assess the water quality effects of the construction grants program. This system can identify the impact of previously funded needs and the remaining needs most critical to water quality and use attainment. It uses the newly available Reach File, an automated file developed by EPA's Office of Water Regulations and Standards to provide the framework for organizing data on all water bodies in this country. The Reach File provides the key to integrating previously unrelated data bases developed over the years by a broad range of State and Federal agencies. Now linked to the Reach File are the STORET file of ambient water quality data, the U.S. Geological Survey (USGS) streamflow and landforms data, the Industrial Facilities File (IFD), the U.S. Fish and Wildlife Services aquatic life survey data, the Grants Information and Control System (GICS) award data, and the Drinking Water Supply file. Two of the major efforts were locating all existing and proposed discharging POTWs (over 21,000) on reaches and correlating all State-delineated stream segments and associated water quality standards to reaches.

A reach is a water segment that generally extends from one stream junction to another. The Reach File includes unique stream reach, lake, and estuarine shoreline segment identifiers appended to the accepted USGS watershed subdivisions. This file is composed of some 61,000 stream reaches and several thousand shoreline segments. The file also provides streamflow estimates for each reach and the stream network and confluence data.

This work, completed during the 1982 Needs Survey, will provide the foundation for linking municipal treatment facility needs with their receiving water bodies and with expected environmental results. The specific applications and modifications of the work will be proposed by the 1984 EPA-State Needs Survey Working Group and then submitted to all States for approval.

## IX. SUMMARY AND CONCLUSIONS

The 1982 Needs Survey is the best available estimate of the costs to comply nationwide with the goals of the Clean Water Act. The Survey reaffirms the fact that meeting the water quality goals of the Act will require a substantial investment. For the fourth time in a Needs Survey, the effects of the funds spent to date are noticeable in Categories I, II and IV. The latest estimates reflect a better formulated and more consistent survey methodology; more and better information from such sources as new facility plans, basin plans, discharge permits, and the reach file; and the further expansion of the survey to include all facilities and to account for stream use.

The survey shows backlog needs of $23.9 billion for the treatment categories, 64.8 percent of the year 2000 needs of $36.9 billion. The backlog needs of $35.4 billion for Categories I, II, IIIA and IVB are 61.8 percent of the year 2000 needs of $57.3 billion. Overall, backlog needs for categories I-V is $92.6 billion, 78.2 percent of the year 2000 needs of $118.4 billion.

The results of this survey show a decrease in needs from the 1980 needs survey. The needs for Categories I, II, IIIA and IVB have decreased by $9.3 billion, a decrease of 14 percent. The overall needs for categories I-V have decreased by $21.3 billion since the 1980 Survey.

Grant awards have reduced backlog needs and year 2000 needs between 1980 and 1982. The net result is a reduction of 7.5 percent in backlog needs and a reduction of 12.4 percent in the year 2000 needs since 1980. Based on January 1982 dollars, new projects approved between the 1980 and 1982 Surveys account for a reduction of more than $9 billion in the present Survey estimate.

Year 2000 needs for treatment levels greater than secondary have also dropped since the 1980 Survey. The reasons for this are the increased attention focused on advanced treatment projects and on the related water quality based effluent limitations. This has resulted in a more detailed analysis of the need for advanced treatment facilities and in dropping unnecessary treatment processes as a result of project reviews. Compared with the 1980 Needs Survey, Category II needs are reduced by 10.7 percent. Some advanced treatment projects funded during the 1980-1982 period contributed to the reduction in Category II needs.

The 1982 Category V needs to correct combined sewer overflows are 21 percent less than those estimated in the 1980 Needs Survey. For the first time, the 1982 needs were reported as one composite cost estimate of the most cost effective controls needed to maintain the State designated stream use classification of the CSO receiving water. In addition the 1982 reported costs are more realistic because they reflect a higher number of facility plan estimates.

Preliminary analysis of the 1982 Needs Survey data shows the Federal funding potential is approximately $37.3 billion compared with the Agency estimate of $36.3 billion when the 1981 Construction Grant Amendments were enacted.

Advance work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and with water quality impacts in the 1984 Needs Survey. This work developed an automated system that has the potential to assess State and national progress in abating municipal water pollution as well as the water quality and water use improvements from meeting remaining treatment needs.

Based on a requirement in the Conference Report on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272), EPA will provide Congress with a list of marine areas with CSO problems and the estimated costs of correcting them by March 1, 1983.

In conclusion, the Survey results show that the construction grants program is making measurable progress toward meeting national needs for municipal wastewater treatment facilities.

# APPENDIX A

## HOW THE SURVEY WAS CONDUCTED

### I. CATEGORIES I-IV: Treatment Plants and Sewers

#### A. Introduction

The estimate of needs for the 1982 Survey in Categories I-IV is based on experience and data from previous Needs Surveys. EPA, in consultation with a working group of State representatives, determined that the Survey would be conducted for Categories I-IV on a facility-by-facility basis as in 1978 and 1980. A consulting firm, URS, was competitively selected to do the 1980 Survey, and EPA exercised the option to extend the contract to augment the work effort available within EPA and the States for the 1982 Survey. Survey guidance was prepared in cooperation with the States and was discussed in detail during meetings with the States at EPA regional offices. All data from the 1980 Survey were preprinted on the Survey reporting forms as a starting point for the 1982 effort.

For the 1982 Needs Survey, URS not only updated the 1980 Needs Survey file but also added new needs identified since the previous survey. States were asked to review and comment on estimates and provide assistance. The completed estimates were approved by the State and EPA, subjected to a rigorous quality check, and entered into a computer file.

#### B. Survey Approach

The Survey approach taken for Categories I-IV, treatment plants and sewers, was:

1. URS, the EPA consultant, conducted the Survey on a facility-by-facility basis for Categories I-IV. The consultant's personnel formulated the cost estimates.

2. Survey guidance and methodology were formulated for Categories I-IV in draft and circulated to all parties involved in the Survey. State comments were solicited and were reflected in the final guidance.

3. While national uniformity of estimating procedures was a goal, the Survey accommodated the cost and construction differences in various sections of the country where possible.

The formal Survey began with three State/EPA work group meetings and orientation meetings conducted in EPA Regional offices where logistics, target dates, and individual State problems were discussed and resolved. States were asked only to provide as many personnel for the Survey as they considered prudent, but were invited to participate fully in the formal Survey field work. This field work was conducted in the spring, summer, and fall of 1982.

As estimates for Categories I-IV were completed, copies of the estimates were reviewed by States on a facility-by-facility basis. When EPA and State personnel could not agree on costs, States submitted separate estimates which have been included in this report.

Facility estimates were reviewed and accepted and/or approved at four levels: 1) contractor; 2) EPA regional office; 3) State; and 4) EPA headquarters. After machine preparation, data for Categories I-IV were summarized for this report.

### C. Survey Methodology: Operational Guidance for Categories I-IV

Operational guidance for the Survey was formulated jointly by EPA, the States, and the consultant. This guidance included the following subjects:

1. Responsibilities of participants.

2. Target dates for project milestones, including the calendar for the Survey and the consultant's contractural obligations.

3. Descriptions of all data sources to be provided to participants to help complete the Survey.

4. Briefing schedules for participants.

5. Provisions for State and regional review of consultant's data before it became final.

6. Definitions of terms for needs purposes. Standards were established for definitions of secondary treatment, design year, units of measurement, cost estimating, basis of cost estimate, design flows, and infiltration/inflow reporting.

7. Specific guidelines for completing Survey forms.

8. EPA adjustments to the 1980 Needs data base prior to its use as a starting point in 1982.

9. Cost estimating procedures to be used when more reliable local procedures were not available. These included estimating procedures for treatment costs and new sewers, with factors provided for determining cost variations in any of 30 areas near major cities in the United States.

10. Interceptor sewer sizing tables.

As a result of meetings and other communications with all the States, the guidance was supplemented to include:

1. "Rules-of-thumb" for estimating needs based on best engineering judgment. All of the participants understood that rules-of-thumb would be used only when better information was not available. For example:

   a. Per capita domestic and commercial flows were allowed consistent with the construction grant regulations.

   b. Collector sewer length was limited to 16 feet per capita of unsewered population. Interceptor sewer length was determined based on a formula that included size and density of population.

2. A procedure for designating the basis of cost estimates.

3. Additional national cost data showing capital costs for:

   a. filtration;
   b. lagoons;
   c. chlorination.

4. Procedures for estimating backlog needs for all categories.

5. Instructions for reconciliation of population estimates.

6. Guidance for estimation of collector sewer costs.

7. Information on grant eligibilities for land costs.

8. Guidance for estimating infiltration/inflow (I/I) analysis costs.

9. Small cluster and individual onsite treatment systems.

D. Basis of Cost Estimate for Categories I-IV

All individual cost estimates for Categories I-IV of the Survey were accompanied by a basis of cost estimate so that the quality of the estimate could be determined. EPA has determined that the quality of cost estimates generally can be ranked from high to low as follows:

1. Consultant/Engineer final estimate;

2. Consultant/Engineer preliminary estimate;

3. Cost-effectiveness analysis;

4. Cost of previous comparable construction;

5. EPA-supplied cost estimating procedures;

6. State-supplied cost estimating procedures;

7. Rough estimates.

Table 42 shows the percent of State needs reported by basis of estimate. Table 43 shows the relative quality of estimates by Needs Survey category. Note that three bases of estimate (State certification, analysis completed, and evaluation survey completed), refer to Category III (infiltration/inflow correction and major sewer rehabilitation) needs only, and do not apply to other categories.

These tables show that the quality of the cost estimates in the 1980 Survey is substantially higher than that for the 1978 survey, when 37 percent of needs were based on EPA-supplied cost curves.

E. Data Sources for Categories I-IV

1. Many types of data and data sources were used in the Survey. Major data types are:

a. Population (year 2000 and present);

b. Total flow (average, current design, and projected year 2000 design);

c. Industrial flow (average, current design, and projected year 2000 design);

d. Biochemical oxygen demand and suspended solids concentrations (average, current design, and projected year 2000 design);

e. Ammonia and phosphorus removal requirements (average, current design and projected 2000 design);

f. Treatment methods;

g. Sludge handling and treatment methods;

h. Level of treatment required.

2. The sources of these data were:

   a. 1980 Needs Survey;

   b. Facility plans (201 Step I plans);

   c. NPDES applications and permits;

   d. Grant application files;

   e. Grant files and Grants Information and Control System data;

   f. Regional and/or basin plans (208 and 303 plans);

   g. Other engineering plans or reports;

   h. State water quality standards.

F. Survey Preparation

The 1982 Survey form was generated by computer, showing the 1980 data of record and adjusted for cost escalation and new rules governing the 1982 Needs Survey data for each facility. Once the revised cost estimates were recorded on Survey forms for each facility, copies of the completed forms were provided for all parties participating in the Survey, primarily for State review and revision. The forms were then used to record the updated 1982 Needs Survey figures.

Census data for 1980 and Bureau of Economic Analysis (Department of Commerce) year 2000 population projections were used as State ceilings. State population totals were not permitted to exceed these ceilings.

As Survey forms were completed, they were double checked by EPA for the accuracy of the data collected and submitted. Each State was then given the opportunity to review and comment on the revised data and to review the total cost estimates for the State.

Where cost estimate differences were not resolved, States submitted independent cost estimates on the form. Few independent State estimates were required.

## II. CATEGORY V: Control of Combined Sewer Overflows

### A. Background and General Approach

Work on Categories V and VI was undertaken by the URS Company and its subcontractor CH2M Hill with help from EPA and the States. Category V needs estimates were derived from a computerized cost estimating

program that incorporates cost, water quality data and algorithms reported in approved combined sewer overflow abatement facility plans or generated by 15 site studies conducted in cities with diverse wet weather conditions and data availability. This general approach for 1982 was similar to the approach used in 1980.

The Wet Weather Data File, which contains information on each combined sewer system and urbanized area in the nation, was updated and enhanced as part of the 1982 Needs Survey. This file contains the following types of information for each combined sewer facility:

1. Location;
2. Sewer system characteristics;
3. Receiving water characteristics;
4. Annual rainfall and runoff coefficients;
5. Status of CSO correction planning;
6. Grant information;
7. Grant eligible cost estimates.

An important addition to this file during 1982 was the receiving water reach number which identified the water segment receiving the combined sewer overflow and that segment receiving the storm drainage from urbanized areas. The reach number provides a linkage to the U.S. EPA Reach File, which contains hydrologic data, as well as to the stream use classifications and water quality standards data files, which provide information on receiving water designated use.

Other information for the Wet Weather Data File update was obtained from State and local engineering reports, including facility plans and other planning documents. Needs met information, i.e., grant awards, was obtained from the Grants Information and Control File.

B. Needs Estimation Procedure for Category V

Once the update of data was complete, Category V needs were estimated for each facility for four different levels of control. These control levels were:

1. Aesthetics;
2. Public Health;
3. Fisn and Wildlife;
4. Recreation.

If an adequate facility plan estimate was available for a given facility, this estimate was used as the basis for establishing Category V needs. Otherwise, Category V needs were established based on one of the four control levels listed above. The control level chosen was a function of the designated receiving water use for the receiving segment. This linkage of Category V needs reported to Congress to receiving water designated use is the major change from the 1980 Category V needs estimating procedure. In 1980, needs reported to Congress were based on the recreation level of control.

Category V needs were estimated by a two-step procedure. First, needs for all combined sewer systems located in urbanized areas were estimated by the Needs Estimation Program, 1982 Version (NEP82). This program estimates both Category V and VI needs for each of 320 urbanized areas in the United States based on site-specific conditions. These site-specific conditions include the combined sewer service area, the population served by combined sewers, the total area and population of the urbanized area, the total annual rainfall, and the receiving water type and characteristics as well as local construction cost factors. NEP82 develops cost estimates for each of the four control levels discussed above. These estimates are then applied to each CSO facility located within each urbanized area.

The cost data generated by NEP82 were used to develop regression equations relating capital cost for each level of control to the combined sewer service area and population served by combined sewers. Next, these regression equations were used to develop needs estimates for each combined sewer facility located outside of urbanized areas. Receiving water use information was then used to select the most appropriate level of control and resulting needs for each individual CSO facility.

The pollutant removal objectives and technologies used to develop Category V cost estimates for four levels of control are described as follows:

1. Aesthetics

The objectives of the Aesthetics level of control are to remove floatables, coarse debris, and 40 percent of the annual BOD and SS load generated by a combined sewer system. The Aesthetics level is considered the minimum level of control necessary to allow limited noncontact recreational uses of the waters. This level is used as a basis for estimating CSO control needs when the primary receiving water use is navigation or agricultural or industrial raw water supply.

Studies conducted in previous Needs Surveys indicated that the least costly mix of technologies required to achieve an overall 40 percent reduction in CSO pollution loads is a combination of combined sewer flushing and a storage/treatment system utilizing physical/chemical treatment. Aesthetics control level cost estimates are, therefore, based on these approaches.

2. Public Health

The objective of the public health level of control is to remove 90 percent of the annual fecal coliform load generated by a combined sewer system. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is domestic water supply, partial body contact recreation, or noncontact recreation.

Category V Public Health level cost estimates are based on an optimum combination of CSO storage with pumping and chlorination of the discharge sized to capture and kill 90 percent of the fecal coliform bacteria generated by the combined sewer system. This level of control will also result in significant reductions in annual BOD and SS loads due to the sedimentation achieved in the storage facility.

3. Fish and Wildlife

The objective of the Fish and Wildlife level of control is to achieve and maintain a viable fishery in the receiving water. CSO pollutant removal requirements for BOD and SS are estimated by NEP82 for each urbanized area, considering all dry-weather pollutant loads generated by the urbanized area as well as the characteristics of the receiving water. The estimation of required pollutant removal is based on the results of site-specific studies conducted in previous Needs Surveys and may vary from a minimum of 40 percent to a maximum of 90 percent for areawide wet-weather loads. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is aquatic fish and wildlife support for either warm or cold water fisheries.

Once the CSO pollutant removal requirements are established, an optimization procedure based on production theory and marginal cost analysis is used to identify the optimum mix of CSO control technologies that will meet these requirements. Control technologies considered include streetsweeping, combined sewer flushing, and storage/treatment systems. In addition CSO treatment options considered include five different levels of physical/chemical treatment as well as four different alternatives for modification, expansion, and upgrade of existing biological wastewater treatment plants. The optimization procedure will select the least costly combination of the above technologies that will achieve the desired degree of CSO pollution control.

4. Recreation

The objective of the Recreation level of control is to provide receiving water quality suitable for full body contact recreation as well as for a viable fishery. Therefore, it is an increment above the Fish and Wildlife control level. In addition to the CSO pollution removal requirements for BOD and SS established by the Fish and Wildlife level

calculations, the Recreation level will provide for a 95 percent reduction in fecal coliform bacteria generated by the combined sewer system. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is full body contact recreation or shellfish protection.

Category V Recreation level cost estimates are based on an optimum combination of storage and treatment sized to capture and kill 95 percent of the annual CSO fecal coliform load. The treatment option used is the same as the treatment option selected in the Fish and Wildlife calculations. This ensures that BOD and SS removals required for fish and wildlife protection will also be obtained at the Recreation level.

Combined Sewer Overflow Control Technologies

As discussed briefly above, a wide range of CSO control technologies are considered in estimating Category V needs. These technologies can be classified as Best Management Practices (BMPs) or structural controls. BMPs are characterized by low capital costs and high operation and maintenance costs. The BMPs considered in the 1982 Needs Survey include streetsweeping and combined sewer flushing. The objective of streetsweeping is to move street surface contaminants before they enter the collection system and the objective of combined sewer flushing is to transport accumulated collection system pollutants to the existing dry-weather treatment plant. In both cases pollutants are removed from the combined sewer watershed and are, therefore, unavailable for washoff to the receiving water during rainfall/runoff events.

The structural CSO controls considered are wet-weather treatment systems which include facilities to intercept, store, and treat CSO before it enters the receiving water. Wet-weather intercepts are, in general, required to collect the CSO at individual overflow points and to transport the intercepted flow to central storage facilities. The types of storage facilities considered are lined earthen basins, open concrete tanks, and closed concrete tanks. Lined earthen basins are used in areas of low population density, whereas open and closed concrete tanks are used in areas with higher population density. In any case, cost estimates for CSO storage include an allowance for aeration conditions and for facilitating cleanout during dry weather.

Treatment options considered in the Category V needs estimating procedure include construction of new physical/chemical treatment facilities designed to treat CSO only, and modification, expansion, and/or upgrade of existing dry-weather biological treatment facilities designed to treat both dry-weather flow and CSO. A total of nine different treatment levels are considered. The first five levels are physical/chemical treatment systems and the remaining four levels are various dry-chemical treatment system modifications. The nine treatment levels are:

Level 1 - Effluent Pumping (from storage);

Level 2 - Pumping/Microscreening;

Level 3 - Pumping/Microscreening/Flocculation-Sedimentation;

Level 4 - Pumping/Microscreening/Flocculation-Dissolved Air Flotation;

Level 5 - Pumping/Microscreening/Flocculation-Dissolved Air Flotation/High-Rate Filtration;

Level 6 - Series/Parallel Modification of Secondary WWTP;

Level 7 - Enlargement of Secondary WWTP;

Level 8 - Enlargement and Upgrade of Secondary WWTP to AST;

Level 9 - Enlargement and Upgrade of Secondary WWTP to AT.

Level 1 treatment relies on the sedimentation and aeration provided by the CSO storage facility for pollutant removal and is, therefore, applicable only where required removals are small. Levels 2 through 5 provide increasing overall pollutant removal efficiency, using more sophisticated physical/chemical treatment systems.

Treatment Level 6 consists of relatively minor modification of existing WWTPs to double peak hydraulic capacity during wet weather. These modifications will allow the primary portion of the plant to operate in parallel with the secondary portion of the plant, thus increasing peak hydraulic capacity at very little cost. However, pollutant removal efficiencies are greatly reduced.

Treatment Levels 7, 8, and 9 all involve enlargement or enlargement and upgrade of existing dry-weather facilities to develop additional capacity to treat wet-weather flows. All processes in the treatment train operate in series.

Economic Optimization

The economic optimization portion of the Category V needs estimating procedure identifies the technology or mix of technologies from those discussed above that will achieve the desired level of pollution control at the least cost. The economic optimization procedures are based on production theory, where the optimum solution will vary with site-specific conditions, such as size and population density of the combined sewer service area as well as the required pollutant removal. Because CSO flows are intermittent and highly variable, it is almost always more cost effective to construct storage facilities along with treatment facilities rather than to construct treatment facilities alone. If storage were not provided, the required treatment capacity would be sized very large to handle peak flows.

Sewer Separation

A CSO control technology which is available but is not considered directly in the economic optimization procedure is separation of the combined sewer system so that combined sewers no longer exist. As a final step in the needs estimation procedures the cost of sewer separation is compared to the cost of the optimum combination of BMPs and storage/treatment systems. If sewer separation is less expensive, then Category V needs for that facility are based on the cost of sewer separation.

III. Category VI: Control of Urban Stormwater Runoff

Category VI needs estimates were generated by NEP82 for each urbanized area in the United States. These needs estimates were computed using an approach similar to that used to provide Category V (CSO) urbanized area needs. Category VI costs were developed for each of the four levels defined for CSO control. However, some of the technologies considered in CSO control are not applicable to stormwater runoff control. These include combined sewer flushing and modification, sewer separation, and expansion and/or upgrade of existing biological treatment facilities. With these exceptions needs estimates and procedures developed for Category VI closely parallel those for Category V described in of Appendix A.

The cost estimates by State and Territory are based on regulations for the application of the NPDES permit program for separate storm sewers published in the Federal Register of March 18, 1976. In these regulations the term "separate storm sewer" is defined as "conveyance or system of conveyance . . . located in an urbanized area and primarily operated for the purpose of collecting and conveying stormwater runoff." In accordance with this guideline, the geographical areas that require control and/or treatment of stormwater runoff are urbanized areas of the nation as defined by the U.S. Bureau of Census. The specific criteria for the delineation of an urbanized area are as follows:

- A central city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000, and with the smaller of the twin cities having a population of at least 15,000; and

- Surrounding closely settled territory.

## APPENDIX B

### Reasons for Separate State Estimates
### Categories I-VI

Before completion of estimates, all Survey forms were sent to the States for review and comment. States were encouraged to provide as much additional information as possible to secure the best available estimates. Where EPA and State estimates differed, an attempt was made to resolve the differences. To achieve the most accurate and nationally consistent cost estimates, adherence to the Survey guidelines and rules-of-thumb as formulated by the EPA/State Needs Survey Working Group was enforced. Where agreement on specific estimates could not be reached between EPA and State personnel, separate estimates were submitted by States.

Of approximately 463,753 possible estimates, 41 separate estimates (0.008 percent) were submitted by States. Most of these estimates were based on State-developed cost curves or State population projections that exceed allowable ceilings. Other reasons for separate estimates included disagreement on allocation of dollars between Categories I-IV versus Category V, inclusion of ineligible facilities, and differing inflation factors.

## APPENDIX C

### Summary Tables

Cost data from the 1982 Needs Survey are presented in summary tables included in this appendix. The following tables show costs by State and U.S. totals:

Table 1: EPA Assessments of Backlog Costs by Category, Categories I-V.

Table 2: Independent State Assessment of Backlog Needs by Categories I-V.

Table 3: Number of Independent State Backlog Assessments Different from EPA Backlog Assessments.

Table 4: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Categories I-IV.

Table 5: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Category V.

Table 6: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Category VI.

Table 7: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Treatment Plants, Categories I, IIA and IIB.

Table 8: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Categories I, IIA, IIB, IIIA, and IVB.

Table 9: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category I.

Table 10: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Categories IIA and IIB.

Table 11: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IIIA.

Table 12: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IIIB.

Table 13: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IVA.

Table 14: Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IVB.

Table 15: 1982 EPA Assessment of Category V Needs by Basis of Estimate.

Table 16: Comparison of Current and Year 2000 and Per Capita Backlog Costs, Categories I-IV.

Table 17: Per Capita Backlog Estimate, Category V.

Table 18: Comparison of Current and Year 2000 Per Capita Backlog Costs, Categories I, IIA, IIB, IIIA, and IVB.

Table 19: Comparison of Current and Year 2000 Per Capita Backlog costs, Categories I, IIA, IIB.

Table 20: Current Per Capita Backlog Costs by Categories I-IV.

Table 21: 1982 EPA Assessments of Year 2000 Needs by Categories I-IV.

Table 22: Independent State Estimates of Year 2000 Needs by Categories I-IV.

Table 23: Comparison of 1982 and 1980 EPA Assessment of Year 2000 Needs, Categories I-IV.

Table 24: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Treatment Plants, Categories I, IIA, and IIB.

Table 25: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Categories I, IIA, IIB, IIIA, and IVB.

Table 26: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category I.

Table 27: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIA and IIB.

Table 28: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIIA.

Table 29: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIIB.

Table 30: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IVA.

Table 31: Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IVB.

Table 32: Comparison of 1982 and 1980 EPA Assessments of Per Capita Costs for Year 2000 Needs, Categories I-IV.

Table 33: Comparison of 1982 EPA Dollar Assessments with State Dollar Assessments for Categories I-V.

Table 34: Comparison of 1982 EPA and State Estimates, Categories I, IIA, and IIB.

Table 35: Comparison of 1982 EPA and State Estimates, Category IIIA.

Table 36: Comparison of 1982 EPA and State Estimates, Category IVB.

Table 37: Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I-IV.

Table 38: Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I, IIA and IIB.

Table 39: Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I, IIA, IIB, IIIA, and IVB.

Table 40: Number of EPA Cost Assessments by Categories I-V.

Table 41: Number of Facilities Evaluated in Independent State Assessments Compared to EPA Assessments.

Table 42: Percent of Dollar Needs by Basis of Cost Estimate and by State.

Table 43: Percent of National Needs by Basis of Cost Estimate.

DECEMBER 31, 1982
TABLE 1

1982 NEEDS SURVEY

EPA ASSESSMENTS OF BACKLOG NEEDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU V

| | TOTAL | I | IIA | IIB | III A | III B | IV A | IV B | V |
|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 888 | 258 | 65 | 14 | 87 | 4 | 296 | 73 | 0 |
| ALASKA | 249 | 100 | 0 | 0 | 2 | 0 | 84 | 43 | 18 |
| ARIZONA | 277 | 115 | 0 | 0 | 1 | 0 | 133 | 27 | 0 |
| ARKANSAS | 288 | 122 | 17 | 3 | 18 | 2 | 92 | 31 | 0 |
| CALIFORNIA | 3,284 | 986 | 24 | 25 | 61 | 156 | 1,097 | 286 | 565 |
| COLORADO | 193 | 117 | 3 | 0 | 5 | 1 | 19 | 3 | 41 |
| CONNECTICUT | 1,932 | 323 | 39 | 4 | 23 | 16 | 550 | 198 | 775 |
| DELAWARE | 372 | 19 | 4 | 0 | 0 | 2 | 32 | 19 | 292 |
| DIST. OF COLUM. | 83 | 0 | 0 | 9 | 6 | 0 | 0 | 0 | 68 |
| FLORIDA | 2,277 | 808 | 71 | 69 | 77 | 0 | 870 | 370 | 0 |
| GEORGIA | 1,269 | 262 | 128 | 1 | 93 | 14 | 231 | 123 | 414 |
| HAWAII | 333 | 76 | 0 | 0 | 0 | 17 | 191 | 48 | 0 |
| IDAHO | 323 | 87 | 4 | 0 | 7 | 2 | 77 | 28 | 116 |
| ILLINOIS | 3,531 | 322 | 507 | 0 | 178 | 55 | 180 | 191 | 2,096 |
| INDIANA | 3,704 | 221 | 108 | 1 | 47 | 3 | 247 | 107 | 2,967 |
| IOWA | 1,153 | 396 | 76 | 0 | 85 | 1 | 109 | 56 | 426 |
| KANSAS | 855 | 155 | 0 | 0 | 49 | 21 | 97 | 137 | 393 |
| KENTUCKY | 2,499 | 294 | 83 | 0 | 104 | 5 | 398 | 161 | 1,450 |
| LOUISIANA | 791 | 205 | 6 | 0 | 76 | 15 | 333 | 153 | 0 |
| MAINE | 1,320 | 164 | 1 | 0 | 17 | 6 | 196 | 102 | 829 |
| MARYLAND | 838 | 106 | 227 | 0 | 13 | 130 | 225 | 51 | 75 |
| MASSACHUSETTS | 4,747 | 1,233 | 85 | 17 | 20 | 18 | 806 | 574 | 1,990 |
| MICHIGAN | 4,523 | 983 | 194 | 28 | 73 | 99 | 506 | 479 | 2,157 |
| MINNESOTA | 1,105 | 353 | 62 | 12 | 28 | 17 | 128 | 182 | 320 |
| MISSISSIPPI | 509 | 230 | 42 | 2 | 55 | 0 | 115 | 61 | 0 |
| MISSOURI | 2,316 | 643 | 1 | 0 | 37 | 49 | 209 | 326 | 1,047 |
| MONTANA | 235 | 27 | 1 | 0 | 1 | 0 | 34 | 6 | 164 |
| NEBRASKA | 232 | 130 | 0 | 0 | 0 | 1 | 20 | 7 | 72 |
| NEVADA | 109 | 38 | 17 | 6 | 2 | 3 | 33 | 6 | 0 |
| NEW HAMPSHIRE | 1,159 | 225 | 2 | 2 | 9 | 4 | 264 | 208 | 443 |
| NEW JERSEY | 5,426 | 1,847 | 181 | 97 | 226 | 2 | 440 | 614 | 2,015 |
| NEW MEXICO | 121 | 73 | 0 | 0 | 0 | 0 | 37 | 9 | 0 |
| NEW YORK | 16,124 | 3,290 | 122 | 56 | 186 | 3,759 | 2,327 | 765 | 5,620 |
| NORTH CAROLINA | 1,070 | 300 | 94 | 32 | 84 | 0 | 404 | 151 | 2 |
| NORTH DAKOTA | 32 | 12 | 0 | 0 | 0 | 0 | 2 | 3 | 13 |
| OHIO | 6,325 | 693 | 393 | 69 | 134 | 21 | 669 | 484 | 3,878 |
| OKLAHOMA | 275 | 105 | 4 | 1 | 13 | 9 | 84 | 55 | 0 |
| OREGON | 1,274 | 94 | 28 | 0 | 71 | 17 | 313 | 81 | 674 |
| PENNSYLVANIA | 5,354 | 903 | 169 | 15 | 15 | 0 | 1,315 | 288 | 2,646 |
| RHODE ISLAND | 627 | 173 | 12 | 0 | 2 | 29 | 153 | 77 | 177 |
| SOUTH CAROLINA | 472 | 129 | 25 | 3 | 76 | 0 | 266 | 169 | 0 |
| SOUTH DAKOTA | 129 | 65 | 7 | 1 | 2 | 0 | 2 | 4 | 43 |
| TENNESSEE | 1,452 | 300 | 125 | 1 | 153 | 3 | 398 | 120 | 346 |
| TEXAS | 2,853 | 833 | 97 | 2 | 181 | 29 | 418 | 469 | 21 |
| UTAH | 211 | 94 | 37 | 0 | 11 | 0 | 48 | 17 | 2 |
| VERMONT | 475 | 84 | 19 | 0 | 7 | 3 | 69 | 29 | 241 |
| VIRGINIA | 1,468 | 483 | 33 | 30 | 18 | 2 | 398 | 230 | 274 |
| WASHINGTON | 2,766 | 465 | 3 | 13 | 115 | 62 | 528 | 284 | 1,292 |
| WEST VIRGINIA | 2,437 | 358 | 19 | 1 | 4 | 2 | 699 | 183 | 1,167 |
| WISCONSIN | 1,841 | 517 | 86 | 0 | 32 | 79 | 218 | 546 | 369 |
| WYOMING | 69 | 39 | 3 | 0 | 1 | 0 | 2 | 3 | 18 |
| AMERICAN SAMOA | 36 | 13 | 0 | 0 | 0 | 0 | 6 | 15 | 0 |
| GUAM | 18 | 8 | 0 | 0 | 0 | 0 | 7 | 1 | 0 |
| MARIANAS GROUP | 39 | 9 | 1 | 0 | 0 | 0 | 15 | 13 | 0 |
| PUERTO RICO | 954 | 174 | 2 | 0 | 18 | 11 | 329 | 245 | 171 |
| PAC. TR. TERR. | 75 | 40 | 0 | 0 | 0 | 0 | 23 | 10 | 0 |
| VIRGIN ISLANDS | 26 | 10 | 0 | 0 | 0 | 0 | 12 | 3 | 0 |
| U.S. TOTALS | 92,595 | 28,137 | 3,245 | 528 | 2,558 | 4,691 | 16,769 | 8,933 | 35,739 |

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 2

1982 NEEDS SURVEY

INDEPENDENT STATE ASSESSMENT OF BACKLOG NEEDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU V

| | TOTAL | I | IIA | IIB | III A | III B | IV A | IV B | V |
|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 800 | 258 | 65 | 14 | 87 | 4 | 296 | 73 | 0 |
| ALASKA | 249 | 100 | 0 | 0 | 2 | 0 | 84 | 43 | 18 |
| ARIZONA | 277 | 115 | 0 | 0 | 1 | 0 | 133 | 27 | 0 |
| ARKANSAS | 288 | 122 | 17 | 3 | 18 | 2 | 92 | 31 | 0 |
| CALIFORNIA | 3,343 | 986 | 24 | 25 | 200 | 156 | 1,097 | 286 | 565 |
| COLORADO | 193 | 117 | 3 | 0 | 5 | 1 | 19 | 3 | 41 |
| CONNECTICUT | 1,932 | 323 | 39 | 4 | 23 | 16 | 550 | 198 | 775 |
| DELAWARE | 372 | 19 | 4 | 0 | 0 | 2 | 32 | 19 | 292 |
| DIST. OF COLUM. | 83 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 68 |
| FLORIDA | 2,277 | 808 | 71 | 69 | 77 | 0 | 870 | 370 | 8 |
| GEORGIA | 1,269 | 262 | 128 | 1 | 93 | 14 | 231 | 123 | 414 |
| HAWAII | 333 | 76 | 0 | 0 | 0 | 17 | 191 | 48 | 0 |
| IDAHO | 323 | 87 | 4 | 0 | 7 | 2 | 77 | 28 | 116 |
| ILLINOIS | 3,531 | 322 | 507 | 0 | 178 | 55 | 180 | 191 | 2,096 |
| INDIANA | 3,704 | 221 | 108 | 1 | 47 | 3 | 247 | 107 | 2,967 |
| IOWA | 1,153 | 396 | 76 | 0 | 85 | 1 | 109 | 56 | 426 |
| KANSAS | 855 | 155 | 0 | 0 | 49 | 21 | 97 | 137 | 393 |
| KENTUCKY | 2,499 | 294 | 83 | 0 | 104 | 5 | 398 | 161 | 1,450 |
| LOUISIANA | 791 | 205 | 6 | 0 | 76 | 15 | 333 | 153 | 0 |
| MAINE | 1,320 | 164 | 1 | 0 | 17 | 6 | 196 | 102 | 829 |
| MARYLAND | 830 | 106 | 227 | 0 | 13 | 130 | 225 | 51 | 75 |
| MASSACHUSETTS | 4,747 | 1,233 | 85 | 17 | 20 | 18 | 806 | 574 | 1,990 |
| MICHIGAN | 4,523 | 983 | 194 | 28 | 73 | 99 | 586 | 479 | 2,157 |
| MINNESOTA | 1,105 | 353 | 62 | 12 | 28 | 17 | 128 | 162 | 320 |
| MISSISSIPPI | 509 | 230 | 42 | 2 | 55 | 0 | 115 | 61 | 0 |
| MISSOURI | 2,316 | 643 | 1 | 0 | 37 | 49 | 209 | 326 | 1,047 |
| MONTANA | 235 | 27 | 1 | 0 | 1 | 0 | 34 | 6 | 164 |
| NEBRASKA | 232 | 130 | 0 | 0 | 0 | 1 | 20 | 7 | 72 |
| NEVADA | 109 | 38 | 17 | 6 | 2 | 3 | 33 | 6 | 0 |
| NEW HAMPSHIRE | 1,159 | 225 | 2 | 2 | 9 | 4 | 264 | 286 | 443 |
| NEW JERSEY | 5,426 | 1,847 | 181 | 97 | 226 | 2 | 440 | 614 | 2,015 |
| NEW MEXICO | 121 | 73 | 0 | 0 | 0 | 0 | 37 | 9 | 0 |
| NEW YORK | 16,128 | 3,290 | 122 | 56 | 186 | 3,759 | 2,327 | 765 | 5,620 |
| NORTH CAROLINA | 1,070 | 300 | 94 | 32 | 84 | 0 | 484 | 151 | 2 |
| NORTH DAKOTA | 32 | 12 | 0 | 0 | 0 | 0 | 2 | 3 | 13 |
| OHIO | 6,325 | 693 | 393 | 69 | 134 | 21 | 669 | 464 | 3,878 |
| OKLAHOMA | 275 | 105 | 4 | 1 | 13 | 9 | 84 | 55 | 0 |
| OREGON | 1,274 | 94 | 28 | 0 | 71 | 17 | 313 | 81 | 674 |
| PENNSYLVANIA | 5,354 | 903 | 169 | 15 | 15 | 0 | 1,315 | 288 | 2,646 |
| RHODE ISLAND | 627 | 173 | 12 | 0 | 2 | 29 | 153 | 77 | 177 |
| SOUTH CAROLINA | 672 | 129 | 25 | 3 | 76 | 0 | 266 | 169 | 0 |
| SOUTH DAKOTA | 129 | 65 | 7 | 1 | 2 | 0 | 2 | 4 | 43 |
| TENNESSEE | 1,452 | 300 | 125 | 1 | 153 | 3 | 398 | 170 | 346 |
| TEXAS | 2,060 | 836 | 97 | 2 | 181 | 29 | 418 | 473 | 21 |
| UTAH | 211 | 94 | 37 | 0 | 11 | 0 | 48 | 17 | 2 |
| VERMONT | 475 | 84 | 19 | 0 | 7 | 3 | 69 | 29 | 261 |
| VIRGINIA | 1,448 | 463 | 33 | 30 | 18 | 2 | 390 | 230 | 278 |
| WASHINGTON | 2,766 | 465 | 3 | 13 | 115 | 62 | 528 | 284 | 1,292 |
| WEST VIRGINIA | 2,437 | 358 | 19 | 1 | 4 | 2 | 699 | 183 | 1,167 |
| WISCONSIN | 1,841 | 517 | 86 | 0 | 32 | 79 | 218 | 546 | 369 |
| WYOMING | 69 | 39 | 3 | 0 | 1 | 0 | 2 | 3 | 18 |
| AMERICAN SAMOA | 36 | 13 | 0 | 0 | 0 | 0 | 6 | 15 | 0 |
| GUAM | 18 | 8 | 0 | 0 | 0 | 0 | 7 | 1 | 0 |
| MARIANAS GROUP | 39 | 9 | 1 | 0 | 0 | 0 | 15 | 13 | 0 |
| PUERTO RICO | 954 | 174 | 2 | 0 | 18 | 11 | 329 | 245 | 171 |
| PAC. TR. TERR. | 75 | 40 | 0 | 0 | 0 | 0 | 23 | 10 | 0 |
| VIRGIN ISLANDS | 26 | 10 | 0 | 0 | 0 | 0 | 12 | 3 | 0 |
| U.S. TOTALS | 92,742 | 20,140 | 3,245 | 528 | 2,688 | 4,691 | 16,769 | 8,938 | 35,739 |

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 3

1982 NEEDS SURVEY
NUMBER OF INDEPENDENT STATE BACKLOG ASSESSMENTS
DIFFERENT FROM EPA BACKLOG ASSESSMENTS

| STATE | TOTAL | CAT I | CAT IIA | CAT IIB | CAT IIIA | CAT IIIB | CAT IVA | CAT IVB | CAT V |
|---|---|---|---|---|---|---|---|---|---|
| CALIFORNIA | 1 | | | | | | | 1 | |
| TEXAS | 21 | 3 | | | 1 | | | 18 | |
| US TOTALS | 22 | 3 | | | 1 | | | 18 | |

DECEMBER 31, 1982
TABLE 4

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH IV

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 622,228 | 800,647 | +178,419 | 1.0118 | 1.4081 | +0.3963 |
| ALASKA | 352,102 | 230,873 | -121,229 | 0.5725 | 0.4060 | -0.1665 |
| ARIZONA | 277,322 | 277,270 | -52 | 0.4509 | 0.4876 | +0.0366 |
| ARKANSAS | 307,371 | 288,310 | -19,061 | 0.4998 | 0.5070 | +0.0072 |
| CALIFORNIA | 3,921,805 | 2,638,685 | -1,283,120 | 6.3776 | 4.6409 | -1.7367 |
| COLORADO | 258,917 | 151,755 | -107,162 | 0.4210 | 0.2669 | -0.1541 |
| CONNECTICUT | 1,038,700 | 1,157,181 | +118,481 | 1.6891 | 2.0352 | +0.3461 |
| DELAWARE | 120,604 | 79,974 | -40,720 | 0.1962 | 0.1406 | -0.0556 |
| DIST. OF COLUM. | 26,466 | 15,509 | -10,957 | 0.0430 | 0.0272 | -0.0157 |
| FLORIDA | 2,353,974 | 2,268,938 | -85,036 | 3.8280 | 3.9906 | +0.1625 |
| GEORGIA | 712,765 | 854,674 | +141,909 | 1.1591 | 1.5032 | +0.3441 |
| HAWAII | 520,205 | 333,987 | -186,218 | 0.8459 | 0.5874 | -0.2585 |
| IDAHO | 252,055 | 207,267 | -44,788 | 0.4098 | 0.3645 | -0.0453 |
| ILLINOIS | 1,966,945 | 1,435,815 | -531,130 | 3.1986 | 2.5253 | -0.6733 |
| INDIANA | 875,619 | 737,378 | -138,241 | 1.4239 | 1.2969 | -0.1270 |
| IOWA | 807,002 | 726,947 | -80,055 | 1.3123 | 1.2785 | -0.0337 |
| KANSAS | 567,352 | 462,074 | -105,278 | 0.9226 | 0.8127 | -0.1099 |
| KENTUCKY | 1,003,173 | 1,048,918 | +45,745 | 1.6313 | 1.8448 | +0.2134 |
| LOUISIANA | 721,613 | 791,031 | +69,418 | 1.1734 | 1.3912 | +0.2177 |
| MAINE | 547,056 | 490,936 | -56,120 | 0.8896 | 0.8634 | -0.0261 |
| MARYLAND | 2,825,540 | 755,401 | -2,070,179 | 4.5949 | 1.3286 | -3.2663 |
| MASSACHUSETTS | 2,540,800 | 2,757,337 | +176,537 | 4.1309 | 4.8496 | +0.6527 |
| MICHIGAN | 2,735,081 | 2,365,964 | -369,117 | 4.4478 | 4.1612 | -0.2865 |
| MINNESOTA | 952,143 | 784,948 | -167,195 | 1.5483 | 1.3805 | -0.1678 |
| MISSISSIPPI | 570,837 | 509,129 | -61,708 | 0.9283 | 0.8954 | -0.0328 |
| MISSOURI | 1,553,146 | 1,268,912 | -284,234 | 2.5257 | 2.2317 | -0.2939 |
| MONTANA | 49,930 | 71,244 | +21,314 | 0.0811 | 0.1253 | +0.0441 |
| NEBRASKA | 176,482 | 159,461 | -17,021 | 0.2869 | 0.2804 | -0.0065 |
| NEVADA | 127,058 | 109,469 | -17,589 | 0.2066 | 0.1925 | -0.0140 |
| NEW HAMPSHIRE | 762,256 | 715,555 | -46,701 | 1.2395 | 1.2585 | +0.0189 |
| NEW JERSEY | 2,650,581 | 3,410,822 | +760,241 | 4.3104 | 5.9990 | +1.6886 |
| NEW MEXICO | 105,057 | 121,219 | +16,162 | 0.1708 | 0.2132 | +0.0423 |
| NEW YORK | 11,048,834 | 10,508,152 | -540,682 | 17.9677 | 18.4818 | +0.5141 |
| NORTH CAROLINA | 1,147,516 | 1,067,162 | -80,354 | 1.8661 | 1.8769 | +0.0108 |
| NORTH DAKOTA | 17,965 | 19,261 | +1,296 | 0.0292 | 0.0338 | +0.0046 |
| OHIO | 2,356,088 | 2,446,629 | +90,541 | 3.8314 | 4.3031 | +0.4716 |
| OKLAHOMA | 346,488 | 275,988 | -70,412 | 0.5633 | 0.4854 | -0.0779 |
| OREGON | 594,208 | 600,329 | +6,121 | 0.9663 | 1.0558 | +0.0895 |
| PENNSYLVANIA | 2,676,834 | 2,707,936 | +31,102 | 4.3538 | 4.7627 | +0.4089 |
| RHODE ISLAND | 634,590 | 450,076 | -184,514 | 1.0319 | 0.7916 | -0.2403 |
| SOUTH CAROLINA | 485,186 | 672,075 | +186,889 | 0.7890 | 1.1820 | +0.3930 |
| SOUTH DAKOTA | 90,241 | 85,331 | -4,910 | 0.1467 | 0.1500 | +0.0033 |
| TENNESSEE | 1,056,754 | 1,105,187 | +48,433 | 1.7185 | 1.9438 | +0.2253 |
| TEXAS | 1,607,356 | 2,031,650 | +424,292 | 2.6139 | 3.5732 | +0.9593 |
| UTAH | 309,097 | 209,262 | -99,835 | 0.5026 | 0.3680 | -0.1346 |
| VERMONT | 223,767 | 214,466 | -9,301 | 0.3638 | 0.3772 | +0.0133 |
| VIRGINIA | 1,208,067 | 1,189,868 | -18,199 | 1.9645 | 2.0927 | +0.1281 |
| WASHINGTON | 1,312,136 | 1,474,119 | +161,983 | 2.1338 | 2.5927 | +0.4588 |
| WEST VIRGINIA | 1,051,680 | 1,269,492 | +217,812 | 1.7102 | 2.2328 | +0.5225 |
| WISCONSIN | 1,734,762 | 1,472,344 | -262,418 | 2.8210 | 2.5895 | -0.2315 |
| WYOMING | 47,966 | 50,587 | +2,621 | 0.0780 | 0.0889 | +0.0109 |
| AMERICAN SAMOA | 56,425 | 36,234 | -20,191 | 0.0917 | 0.0637 | -0.0280 |
| GUAM | 22,993 | 18,533 | -4,460 | 0.0373 | 0.0325 | -0.0047 |
| MARIANAS GROUP | 42,216 | 39,557 | -2,659 | 0.0686 | 0.0695 | +0.0009 |
| PUERTO RICO | 953,565 | 782,611 | -170,954 | 1.5506 | 1.3764 | -0.1742 |
| PAC. TR. TERR. | 84,017 | 75,562 | -8,455 | 0.1366 | 0.1329 | -0.0037 |
| VIRGIN ISLANDS | 41,654 | 26,416 | -15,238 | 0.0677 | 0.0464 | -0.0212 |
| U.S. TOTALS | 61,492,634 | 56,856,457 | -4,636,177 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

DECEMBER 31, 1982
TABLE 5

COMPARISON OF 1980 AND 1982 ASSESSMENT OF
BACKLOG NEEDS, CATEGORY V.
THOUSANDS OF 1982 DOLLARS

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| STATE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| ALASKA | 18,908 | 18,388 | -520 | 0.0416 | 0.0515 | 0.0099 |
| ARIZONA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| ARKANSAS | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| CALIFORNIA | 636,445 | 565,957 | -70,488 | 1.4068 | 1.5836 | 0.1768 |
| COLORADO | 97,663 | 41,547 | -56,116 | 0.2158 | 0.1162 | -.0996 |
| CONNECTICUT | 799,636 | 775,272 | -24,364 | 1.7676 | 2.1692 | 0.4016 |
| DELAWARE | 284,566 | 292,110 | 7,544 | 0.6289 | 0.8173 | 0.1884 |
| DIST. OF COLUMBIA | 509,016 | 68,119 | -441,797 | 1.1271 | 0.1906 | -.9365 |
| FLORIDA | 7,335 | 8,526 | 1,191 | 0.0161 | 0.0239 | 0.0078 |
| GEORGIA | 395,779 | 414,737 | 18,958 | 0.8748 | 1.1604 | 0.2856 |
| HAWAII | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| IDAHO | 107,155 | 116,380 | 9,225 | 0.2367 | 0.3256 | 0.0889 |
| ILLINOIS | 2,717,271 | 2,096,022 | -621,249 | 6.0069 | 5.8647 | -.1422 |
| INDIANA | 3,561,855 | 2,967,239 | -594,616 | 7.8740 | 8.3024 | 0.4284 |
| IOWA | 359,701 | 426,592 | 66,891 | 0.7950 | 1.1936 | 0.3986 |
| KANSAS | 367,384 | 393,061 | 25,677 | 0.8120 | 1.0998 | 0.2878 |
| KENTUCKY | 1,000,774 | 1,450,892 | 450,118 | 2.2123 | 4.0596 | 1.8473 |
| LOUISIANA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| MAINE | 1,160,725 | 829,562 | -331,163 | 2.5659 | 2.3211 | -.2448 |
| MARYLAND | 98,127 | 75,141 | -22,986 | 0.2168 | 0.2102 | -.0066 |
| MASSACHUSETTS | 2,534,376 | 1,990,374 | -544,002 | 5.6026 | 5.5691 | -.0335 |
| MICHIGAN | 2,264,938 | 2,157,457 | -107,481 | 5.0069 | 6.0366 | 1.0297 |
| MINNESOTA | 390,252 | 320,721 | -69,531 | 0.8626 | 0.8974 | 0.0348 |
| MISSISSIPPI | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| MISSOURI | 896,448 | 1,047,436 | 54,948 | 2.1895 | 2.9307 | 0.7412 |
| MONTANA | 177,279 | 164,019 | -13,260 | 0.3807 | 0.4589 | 0.0782 |
| NEBRASKA | 103,558 | 72,783 | -30,775 | 0.2288 | 0.2036 | -.0252 |
| NEVADA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| NEW HAMPSHIRE | 513,785 | 443,788 | -69,997 | 1.1357 | 1.2417 | 0.1060 |
| NEW JERSEY | 3,423,762 | 2,015,494 | -1,408,268 | 7.5688 | 5.6394 | -1.929 |
| NEW MEXICO | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| NEW YORK | 9,110,513 | 5,620,385 | -3,490,128 | 20.1405 | 15.7260 | -4.415 |
| NORTH CAROLINA | 7,054 | 2,943 | -4,111 | 0.0156 | 0.0082 | -.0072 |
| NORTH DAKOTA | 38,303 | 13,331 | -24,972 | 0.0845 | 0.0373 | -.0472 |
| OHIO | 3,495,196 | 3,878,731 | 183,535 | 8.1688 | 10.8528 | 2.6840 |
| OKLAHOMA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| OREGON | 332,574 | 674,022 | 341,448 | 0.7351 | 1.8859 | 1.1508 |
| PENNSYLVANIA | 5,354,005 | 2,646,113 | -2,707,892 | 11.8359 | 7.4039 | -4.432 |
| RHODE ISLAND | 448,607 | 177,617 | -270,995 | 0.9916 | 0.4970 | -.4946 |
| SOUTH CAROLINA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| SOUTH DAKOTA | 81,793 | 43,897 | -37,896 | 0.1807 | 0.1228 | -.0579 |
| TENNESSEE | 272,748 | 346,840 | 74,092 | 0.6028 | 0.9705 | 0.3677 |
| TEXAS | 27,385 | 21,429 | -5,956 | 0.0606 | 0.0600 | -.0006 |
| UTAH | 5 | 2,597 | 2,592 | 0.0111 | 0.0073 | -.0038 |
| VERMONT | 265,812 | 261,494 | -4,318 | 0.5875 | 0.7317 | 0.1442 |
| VIRGINIA | 537,944 | 278,640 | -259,304 | 1.1891 | 0.7796 | -.4095 |
| WASHINGTON | 1,031,400 | 1,292,435 | 260,629 | 2.2809 | 3.6163 | 1.3354 |
| WEST VIRGINIA | 982,385 | 1,167,555 | 185,170 | 2.1716 | 3.2668 | 1.0952 |
| WISCONSIN | 472,378 | 369,658 | -102,728 | 1.0441 | 1.0343 | -.0098 |
| WYOMING | 10,346 | 18,687 | 8,659 | 0.0426 | 0.0523 | 0.0097 |
| AMERICAN SAMOA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| GUAM | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| MARIANAS GROUP | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| PUERTO RICO | 34,920 | 171,557 | 136,637 | 0.0770 | 0.4800 | 0.4030 |
| PAC. TR. TERR. | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| VIRGIN ISLANDS | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| U.S. TOTALS | 45,229,453 | 35,739,535 | -9,489,918 | 100.0000 | 100.0000 | 0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1980 AND 1982 ASSESSMENT OF
BACKLOG NEEDS, CATEGORY VI.
THOUSANDS OF 1982 DOLLARS

| STATE | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 2,429,385 | 2,049,124 | -380,261 | 1.7552 | 2.1984 | 0.4432 |
| ALASKA | 1,202,107 | 312,820 | -889,286 | 0.8684 | 0.3356 | -.5328 |
| ARIZONA | 1,399,818 | 305,644 | -1,094,175 | 1.0113 | 0.3279 | -.6834 |
| ARKANSAS | 814,144 | 759,343 | -54,801 | 0.5881 | 0.8147 | 0.2266 |
| CALIFORNIA | 13,392,518 | 7,971,994 | -5,420,524 | 9.6768 | 8.5529 | -1.124 |
| COLORADO | 988,474 | 338,856 | -651,618 | 0.7141 | 0.3614 | -.3527 |
| CONNECTICUT | 5,366,627 | 4,766,629 | -599,798 | 3.8630 | 5.0925 | 1.2295 |
| DELAWARE | 770,184 | 724,721 | -45,468 | 0.5564 | 0.7775 | 0.2211 |
| DIST. OF COLUMBIA | 479,727 | 430,082 | -49,645 | 0.3465 | 0.4614 | 0.1149 |
| FLORIDA | 9,813,279 | 11,916,252 | 2,102,973 | 7.0906 | 12.7865 | 5.6959 |
| GEORGIA | 2,679,882 | 2,354,585 | -325,277 | 1.9362 | 2.5262 | 0.5900 |
| HAWAII | 857,150 | 643,903 | -213,247 | 0.6192 | 0.6908 | 0.0716 |
| IDAHO | 103,638 | 58,735 | -44,703 | 0.0746 | 0.0630 | -.0116 |
| ILLINOIS | 3,162,982 | 3,007,742 | -155,240 | 2.2853 | 3.2269 | 0.9416 |
| INDIANA | 2,702,879 | 1,808,966 | -893,186 | 1.9523 | 1.9408 | -.0115 |
| IOWA | 865,680 | 750,040 | -115,640 | 0.6252 | 0.8047 | 0.1795 |
| KANSAS | 1,765,531 | 1,043,081 | -722,451 | 1.2756 | 1.1191 | -.1565 |
| KENTUCKY | 1,980,631 | 2,345,352 | 434,921 | 1.3774 | 2.5162 | 1.1388 |
| LOUISIANA | 1,539,405 | 1,314,958 | -224,447 | 1.1122 | 1.4108 | 0.2986 |
| MAINE | 1,359,089 | 239,674 | -1,119,416 | 0.9819 | 0.2571 | -.7248 |
| MARYLAND | 3,280,198 | 2,917,109 | -363,089 | 2.3700 | 3.1297 | 0.7597 |
| MASSACHUSETTS | 11,050,091 | 6,724,980 | -3,331,191 | 5.8209 | 5.0692 | -.7517 |
| MICHIGAN | 2,850,121 | 2,412,886 | -437,235 | 2.0592 | 2.5887 | 0.5295 |
| MINNESOTA | 1,681,995 | 961,092 | -720,903 | 1.2152 | 1.0311 | -.1841 |
| MISSISSIPPI | 554,250 | 654,169 | 99,912 | 0.4003 | 0.7018 | 0.3015 |
| MISSOURI | 1,645,623 | 1,525,770 | -119,853 | 1.1889 | 1.6369 | 0.4480 |
| MONTANA | 103,550 | 35,212 | -68,338 | 0.0747 | 0.0378 | -.0369 |
| NEBRASKA | 302,384 | 192,972 | -109,412 | 0.2183 | 0.2070 | -.0113 |
| NEVADA | 544,551 | 153,649 | -395,862 | 0.3989 | 0.1649 | -.2320 |
| NEW HAMPSHIRE | 3,246,910 | 1,670,462 | -1,576,454 | 2.3460 | 1.7922 | -.5538 |
| NEW JERSEY | 15,214,778 | 3,791,519 | -11,423,259 | 10.9935 | 4.0678 | -6.926 |
| NEW MEXICO | 234,548 | 50,176 | -184,412 | 0.1701 | 0.0538 | -.1163 |
| NEW YORK | 4,779,689 | 1,159,688 | -3,620,002 | 3.4533 | 1.2439 | -2.209 |
| NORTH CAROLINA | 2,038,784 | 1,044,696 | -988,088 | 1.4672 | 1.1208 | -.3464 |
| NORTH DAKOTA | 35,634 | 14,463 | -21,171 | 0.0256 | 0.0155 | -.0101 |
| OHIO | 4,867,543 | 4,753,459 | -94,084 | 3.5025 | 5.0998 | 1.5973 |
| OKLAHOMA | 1,002,443 | 594,645 | -407,798 | 0.7242 | 0.6380 | -.0862 |
| OREGON | 1,574,398 | 2,081,460 | 507,062 | 1.1375 | 2.2331 | 1.0956 |
| PENNSYLVANIA | 7,985,825 | 3,148,339 | -4,737,486 | 5.7123 | 3.3992 | -2.313 |
| RHODE ISLAND | 999,902 | 792,534 | -207,369 | 0.7223 | 0.8503 | 0.1280 |
| SOUTH CAROLINA | 1,043,944 | 539,342 | -503,702 | 0.7535 | 0.5786 | -.1749 |
| SOUTH DAKOTA | 44,934 | 23,047 | -21,888 | 0.0648 | 0.0247 | -.0221 |
| TENNESSEE | 2,594,018 | 2,781,083 | 185,065 | 1.8756 | 2.9837 | 1.1081 |
| TEXAS | 8,315,978 | 4,322,271 | -3,993,705 | 6.0087 | 4.6372 | -1.371 |
| UTAH | 501,642 | 64,325 | -439,367 | 0.3638 | 0.0690 | -.2948 |
| VERMONT | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| VIRGINIA | 5,724,872 | 3,818,715 | -1,906,157 | 4.1364 | 4.0970 | -.0394 |
| WASHINGTON | 2,519,146 | 2,841,571 | 322,405 | 1.8201 | 3.0486 | 1.2285 |
| WEST VIRGINIA | 606,718 | 597,071 | -9,647 | 0.4382 | 0.6406 | 0.2024 |
| WISCONSIN | 1,931,569 | 1,724,750 | -206,819 | 1.3955 | 1.8504 | 0.4549 |
| WYOMING | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| AMERICAN SAMOA | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| GUAM | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| MARIANAS GROUP | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| PUERTO RICO | 615,748 | 676,639 | 60,891 | 0.4448 | 0.7259 | 0.2811 |
| PAC. TR. TERR. | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| VIRGIN ISLANDS | 0 | 0 | 0 | 0 | 0.0000 | 0 |
| U.S. TOTALS | 138,396,233 | 93,208,260 | -45,187,973 | 100.0000 | 100.0000 | 0.0000 |

DECEMBER 31, 1982
TABLE 7

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 215,200 | 338,468 | +123,268 | 0.8523 | 1.4154 | +0.5631 |
| ALASKA | 242,348 | 100,587 | -141,761 | 0.9598 | 0.4206 | -0.5391 |
| ARIZONA | 136,841 | 115,590 | -21,251 | 0.5420 | 0.4833 | -0.0586 |
| ARKANSAS | 145,517 | 142,926 | -2,591 | 0.5763 | 0.5977 | +0.0214 |
| CALIFORNIA | 1,833,183 | 1,036,488 | -796,695 | 7.2609 | 4.3344 | -2.9264 |
| COLORADO | 103,555 | 121,700 | +18,145 | 0.4101 | 0.5089 | +0.0988 |
| CONNECTICUT | 372,596 | 367,596 | -5,000 | 1.4757 | 1.5372 | +0.0615 |
| DELAWARE | 52,054 | 24,469 | -27,585 | 0.2061 | 0.1023 | -0.1037 |
| DIST. OF COLUM. | 9,175 | 9,036 | -139 | 0.0363 | 0.0377 | +0.0014 |
| FLORIDA | 924,061 | 950,234 | +26,173 | 3.6608 | 3.9737 | +0.3137 |
| GEORGIA | 290,058 | 391,613 | +101,555 | 1.1488 | 1.6376 | +0.4888 |
| HAWAII | 153,665 | 76,862 | -76,803 | 0.6086 | 0.3214 | -0.2871 |
| IDAHO | 124,055 | 92,156 | -31,899 | 0.4913 | 0.3853 | -0.1059 |
| ILLINOIS | 1,390,940 | 829,970 | -560,970 | 5.5092 | 3.4708 | -2.0383 |
| INDIANA | 386,574 | 331,317 | -55,257 | 1.5311 | 1.3855 | -0.1455 |
| IOWA | 474,898 | 473,201 | -1,697 | 1.8809 | 1.9788 | +0.0979 |
| KANSAS | 217,927 | 155,973 | -61,954 | 0.8631 | 0.6522 | -0.2108 |
| KENTUCKY | 335,050 | 378,972 | +43,922 | 1.3270 | 1.5848 | +0.2578 |
| LOUISIANA | 201,255 | 211,684 | +10,429 | 0.7971 | 0.8852 | +0.0881 |
| MAINE | 185,120 | 167,275 | -17,845 | 0.7332 | 0.6995 | -0.0336 |
| MARYLAND | 668,920 | 334,166 | -334,754 | 2.6494 | 1.3974 | -1.2519 |
| MASSACHUSETTS | 1,028,025 | 1,337,408 | +309,383 | 4.0718 | 5.5928 | +1.5210 |
| MICHIGAN | 1,336,995 | 1,207,052 | -129,943 | 5.2956 | 5.0477 | -0.2478 |
| MINNESOTA | 422,779 | 428,412 | +5,633 | 1.6745 | 1.7915 | +0.1170 |
| MISSISSIPPI | 269,030 | 275,598 | +6,568 | 1.0655 | 1.1525 | +0.0870 |
| MISSOURI | 793,552 | 645,651 | -147,901 | 3.1431 | 2.7000 | -0.4430 |
| MONTANA | 27,544 | 28,713 | +1,169 | 0.1090 | 0.1200 | +0.0110 |
| NEBRASKA | 145,411 | 130,033 | -15,378 | 0.5759 | 0.5437 | -0.0321 |
| NEVADA | 72,966 | 62,775 | -10,191 | 0.2890 | 0.2625 | -0.0264 |
| NEW HAMPSHIRE | 227,951 | 230,211 | +2,260 | 0.9028 | 0.9627 | +0.0599 |
| NEW JERSEY | 1,385,462 | 2,126,069 | +740,607 | 5.4875 | 8.8909 | +3.4034 |
| NEW MEXICO | 62,355 | 74,249 | +11,894 | 0.2469 | 0.3105 | +0.0636 |
| NEW YORK | 3,388,874 | 3,469,503 | +80,629 | 13.4227 | 14.5098 | +1.0863 |
| NORTH CAROLINA | 550,733 | 426,877 | -123,856 | 2.1813 | 1.7851 | -0.3961 |
| NORTH DAKOTA | 13,363 | 12,787 | -576 | 0.0529 | 0.0534 | +0.0005 |
| OHIO | 1,111,345 | 1,156,524 | +45,179 | 4.4018 | 4.8364 | +0.4346 |
| OKLAHOMA | 115,867 | 111,327 | -4,540 | 0.4589 | 0.4655 | +0.0066 |
| OREGON | 118,977 | 116,195 | -2,782 | 0.4712 | 0.4859 | +0.0147 |
| PENNSYLVANIA | 1,208,182 | 1,087,812 | -120,370 | 4.7854 | 4.5491 | -0.2362 |
| RHODE ISLAND | 209,106 | 186,099 | -23,007 | 0.8282 | 0.7782 | -0.0499 |
| SOUTH CAROLINA | 159,909 | 159,235 | -674 | 0.6333 | 0.6659 | +0.0326 |
| SOUTH DAKOTA | 77,979 | 74,182 | -3,797 | 0.3088 | 0.3102 | +0.0014 |
| TENNESSEE | 449,912 | 428,305 | -21,607 | 1.7820 | 1.7911 | +0.0091 |
| TEXAS | 603,132 | 932,401 | +329,269 | 2.3889 | 3.8992 | +1.5103 |
| UTAH | 199,920 | 131,912 | -68,008 | 0.7918 | 0.5516 | -0.2401 |
| VERMONT | 108,197 | 104,818 | -3,379 | 0.4285 | 0.4383 | +0.0098 |
| VIRGINIA | 541,233 | 548,122 | +6,889 | 2.1437 | 2.2921 | +0.1484 |
| WASHINGTON | 471,116 | 482,424 | +11,308 | 1.8660 | 2.0174 | +0.1514 |
| WEST VIRGINIA | 359,191 | 378,527 | +19,336 | 1.4226 | 1.5829 | +0.1603 |
| WISCONSIN | 918,288 | 603,536 | -314,752 | 3.6371 | 2.5239 | -1.1131 |
| WYOMING | 38,384 | 43,178 | +4,794 | 0.1520 | 0.1805 | +0.0285 |
| AMERICAN SAMOA | 16,902 | 13,847 | -3,055 | 0.0669 | 0.0579 | -0.0089 |
| GUAM | 20,252 | 8,487 | -11,765 | 0.0802 | 0.0354 | -0.0447 |
| MARIANAS GROUP | 11,198 | 10,924 | -274 | 0.0443 | 0.0456 | +0.0013 |
| PUERTO RICO | 265,869 | 176,804 | -89,065 | 1.0538 | 0.7393 | -0.3136 |
| PAC. TR. TERR. | 35,466 | 41,353 | +5,887 | 0.1404 | 0.1729 | +0.0325 |
| VIRGIN ISLANDS | 18,790 | 10,978 | -7,812 | 0.0744 | 0.0459 | -0.0284 |
| U.S. TOTALS | 25,247,247 | 23,912,611 | -1,334,636 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CAT I, IIA, IIB, IIIA, AND IVB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 361,272 | 500,016 | +138,744 | 0.9576 | 1.4126 | +0.4550 |
| ALASKA | 311,028 | 146,460 | -164,568 | 0.8244 | 0.4137 | -0.4106 |
| ARIZONA | 172,762 | 144,034 | -28,728 | 0.4579 | 0.4069 | -0.0509 |
| ARKANSAS | 198,485 | 193,341 | -5,144 | 0.5261 | 0.5462 | +0.0201 |
| CALIFORNIA | 2,681,149 | 1,384,761 | -1,296,388 | 7.1073 | 3.9122 | -3.1950 |
| COLORADO | 117,433 | 131,158 | +13,725 | 0.3112 | 0.3705 | +0.0593 |
| CONNECTICUT | 560,151 | 589,948 | +29,797 | 1.4848 | 1.6667 | +0.1819 |
| DELAWARE | 89,271 | 45,175 | -44,096 | 0.2366 | 0.1276 | -0.1089 |
| DIST. OF COLUM. | 26,466 | 15,509 | -10,957 | 0.0701 | 0.0438 | -0.0262 |
| FLORIDA | 1,307,307 | 1,398,307 | +91,000 | 3.4654 | 3.9504 | +0.4850 |
| GEORGIA | 503,966 | 608,759 | +104,793 | 1.3359 | 1.7198 | +0.3839 |
| HAWAII | 310,181 | 125,501 | -184,680 | 0.8222 | 0.3545 | -0.4676 |
| IDAHO | 169,299 | 127,410 | -41,889 | 0.4487 | 0.3599 | -0.0887 |
| ILLINOIS | 1,777,874 | 1,199,908 | -577,966 | 4.7128 | 3.3899 | -1.3228 |
| INDIANA | 548,988 | 486,769 | -62,219 | 1.4552 | 1.3752 | -0.0799 |
| IOWA | 688,640 | 615,868 | -72,772 | 1.8254 | 1.7399 | -0.0854 |
| KANSAS | 441,660 | 343,026 | -98,634 | 1.1707 | 0.9691 | -0.2015 |
| KENTUCKY | 547,928 | 644,688 | +96,760 | 1.4524 | 1.8213 | +0.3689 |
| LOUISIANA | 397,752 | 441,820 | +44,068 | 1.0543 | 1.2482 | +0.1939 |
| MAINE | 333,141 | 287,881 | -45,260 | 0.8831 | 0.8133 | -0.0697 |
| MARYLAND | 762,697 | 398,816 | -363,881 | 2.0217 | 1.1267 | -0.8949 |
| MASSACHUSETTS | 1,573,866 | 1,932,062 | +358,196 | 4.1720 | 5.4584 | +1.2864 |
| MICHIGAN | 1,894,783 | 1,760,178 | -134,605 | 5.0227 | 4.9728 | -0.0498 |
| MINNESOTA | 783,056 | 639,340 | -143,716 | 2.0757 | 1.8062 | -0.2694 |
| MISSISSIPPI | 470,425 | 392,766 | -77,659 | 1.2470 | 1.1096 | -0.1373 |
| MISSOURI | 1,288,860 | 1,009,786 | -279,074 | 3.4165 | 2.8528 | -0.5636 |
| MONTANA | 37,956 | 36,617 | -1,339 | 0.1006 | 0.1034 | +0.0028 |
| NEBRASKA | 157,941 | 137,712 | -20,229 | 0.4186 | 0.3890 | -0.0295 |
| NEVADA | 88,812 | 72,170 | -16,642 | .2354 | 0.2038 | -0.0315 |
| NEW HAMPSHIRE | 464,223 | 446,496 | -17,727 | 1.2305 | 1.2614 | +0.0309 |
| NEW JERSEY | 1,992,427 | 2,967,685 | +975,258 | 5.2816 | 8.3842 | +3.1026 |
| NEW MEXICO | 71,072 | 83,593 | +12,521 | 0.1884 | 0.2361 | +0.0477 |
| NEW YORK | 4,836,312 | 4,421,507 | -414,805 | 12.8203 | 12.4915 | -0.3287 |
| NORTH CAROLINA | 769,179 | 662,398 | -106,781 | 2.0389 | 1.8713 | -0.1675 |
| NORTH DAKOTA | 15,451 | 16,380 | +929 | 0.0409 | 0.0462 | +0.0053 |
| OHIO | 1,679,248 | 1,755,807 | +76,559 | 4.4514 | 4.9604 | +0.5090 |
| OKLAHOMA | 201,606 | 181,134 | -20,562 | 0.5346 | 0.5117 | -0.0228 |
| OREGON | 271,459 | 268,802 | -2,657 | 0.7195 | 0.7594 | +0.0399 |
| PENNSYLVANIA | 1,486,305 | 1,392,088 | -94,217 | 3.9399 | 3.9329 | -0.0069 |
| RHODE ISLAND | 326,498 | 266,297 | -60,201 | 0.8654 | 0.7523 | -0.1130 |
| SOUTH CAROLINA | 273,058 | 405,161 | +132,083 | 0.7238 | 1.1445 | +0.4207 |
| SOUTH DAKOTA | 85,566 | 81,619 | -3,947 | 0.2268 | 0.2305 | +0.0037 |
| TENNESSEE | 711,625 | 702,899 | -8,726 | 1.8864 | 1.9858 | +0.0994 |
| TEXAS | 1,006,595 | 1,583,415 | +576,820 | 2.6683 | 4.4734 | +1.8051 |
| UTAH | 262,631 | 161,104 | -101,527 | 0.6961 | 0.4551 | -0.2409 |
| VERMONT | 142,887 | 142,188 | -699 | 0.3785 | 0.4014 | +0.0229 |
| VIRGINIA | 899,534 | 796,807 | -92,727 | 2.3580 | 2.2511 | -0.1068 |
| WASHINGTON | 811,642 | 882,559 | +70,917 | 2.1515 | 2.4933 | +0.3418 |
| WEST VIRGINIA | 515,468 | 566,812 | +51,344 | 1.3664 | 1.6013 | +0.2349 |
| WISCONSIN | 1,508,605 | 1,181,696 | -326,909 | 3.9998 | 3.3385 | -0.6604 |
| WYOMING | 47,074 | 47,644 | +570 | 0.1247 | 0.1346 | +0.0099 |
| AMERICAN SAMOA | 45,877 | 29,717 | -16,160 | 0.1216 | 0.0839 | -0.0376 |
| GUAM | 22,993 | 10,973 | -12,020 | 0.0609 | 0.0310 | -0.0298 |
| MARIANAS GROUP | 26,813 | 24,089 | -2,724 | 0.0710 | 0.0680 | -0.0029 |
| PUERTO RICO | 583,868 | 441,096 | -142,772 | 1.5477 | 1.2461 | -0.3015 |
| PAC. TR. TERR. | 46,457 | 51,869 | +5,412 | 0.1231 | 0.1465 | +0.0234 |
| VIRGIN ISLANDS | 26,043 | 14,408 | -11,635 | 0.0690 | 0.0407 | -0.0282 |
| U.S. TOTALS | 37,723,667 | 35,395,929 | -2,327,738 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1982 DOLLARS
CATEGORY I

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 181,271 | 258,211 | +76,940 | 0.8583 | 1.2822 | +0.4238 |
| ALASKA | 242,348 | 100,587 | -141,761 | 1.1475 | 0.4994 | -0.6480 |
| ARIZONA | 136,841 | 115,137 | -21,704 | 0.6479 | 0.5717 | -0.0761 |
| ARKANSAS | 135,110 | 122,241 | -12,869 | 0.6397 | 0.6070 | -0.0327 |
| CALIFORNIA | 1,784,697 | 986,051 | -798,646 | 8.4505 | 4.8964 | -3.5541 |
| COLORADO | 95,945 | 117,742 | +21,797 | 0.4542 | 0.5846 | +0.1303 |
| CONNECTICUT | 312,830 | 323,285 | +10,455 | 1.4812 | 1.6053 | +0.1240 |
| DELAWARE | 47,319 | 19,956 | -27,363 | 0.2240 | 0.0990 | -0.1249 |
| DIST. OF COLUM. | 9,175 | 0 | -9,175 | 0.0434 | 0.0000 | -0.0434 |
| FLORIDA | 693,780 | 808,708 | +114,928 | 3.2850 | 4.0158 | +0.7307 |
| GEORGIA | 219,119 | 262,442 | +43,323 | 1.0375 | 1.3032 | +0.2656 |
| HAWAII | 145,712 | 76,862 | -68,850 | 0.6899 | 0.3816 | -0.3082 |
| IDAHO | 96,056 | 87,396 | -8,660 | 0.4548 | 0.4339 | -0.0208 |
| ILLINOIS | 379,602 | 322,326 | -57,276 | 1.7974 | 1.6005 | -0.1968 |
| INDIANA | 211,798 | 221,386 | +9,588 | 1.0028 | 1.0993 | +0.0964 |
| IOWA | 422,490 | 396,321 | -26,169 | 2.0004 | 1.9680 | -0.0324 |
| KANSAS | 212,123 | 155,823 | -56,300 | 1.0044 | 0.7737 | -0.2306 |
| KENTUCKY | 288,882 | 294,788 | +5,906 | 1.3678 | 1.4638 | +0.0959 |
| LOUISIANA | 197,893 | 205,109 | +7,216 | 0.9370 | 1.0185 | +0.0814 |
| MAINE | 182,304 | 164,984 | -17,320 | 0.8632 | 0.8192 | -0.0439 |
| MARYLAND | 253,154 | 106,709 | -146,445 | 1.1986 | 0.5298 | -0.6687 |
| MASSACHUSETTS | 970,786 | 1,233,926 | +263,140 | 4.5966 | 6.1273 | +1.5306 |
| MICHIGAN | 1,274,668 | 983,755 | -290,905 | 6.0355 | 4.8850 | -1.1504 |
| MINNESOTA | 274,976 | 353,199 | +78,273 | 1.3017 | 1.7538 | +0.4521 |
| MISSISSIPPI | 226,523 | 230,110 | +3,587 | 1.0725 | 1.1426 | +0.0700 |
| MISSOURI | 792,620 | 643,688 | -148,932 | 3.7530 | 3.1963 | -0.5566 |
| MONTANA | 27,423 | 27,391 | -32 | 0.1298 | 0.1360 | +0.0061 |
| NEBRASKA | 145,411 | 130,033 | -15,378 | 0.6885 | 0.6457 | -0.0428 |
| NEVADA | 38,958 | 38,440 | -518 | 0.1844 | 0.1908 | +0.0064 |
| NEW HAMPSHIRE | 216,240 | 225,388 | +9,148 | 1.0238 | 1.1192 | +0.0953 |
| NEW JERSEY | 1,215,464 | 1,847,193 | +631,729 | 5.7552 | 9.1727 | +3.4174 |
| NEW MEXICO | 61,709 | 73,404 | +11,695 | 0.2921 | 0.3644 | +0.0723 |
| NEW YORK | 3,327,983 | 3,290,484 | -37,499 | 15.7581 | 16.3397 | +0.5816 |
| NORTH CAROLINA | 482,310 | 300,151 | -182,159 | 1.9049 | 1.4904 | -0.4144 |
| NORTH DAKOTA | 13,363 | 12,787 | -576 | 0.0632 | 0.0634 | +0.0002 |
| OHIO | 652,150 | 693,849 | +41,699 | 3.0879 | 3.4454 | +0.3575 |
| OKLAHOMA | 104,789 | 105,357 | +568 | 0.4961 | 0.5231 | +0.0269 |
| OREGON | 86,787 | 96,758 | +9,971 | 0.4814 | 0.4705 | +0.0640 |
| PENNSYLVANIA | 1,020,319 | 903,689 | -116,630 | 4.8312 | 4.4875 | -0.3437 |
| RHODE ISLAND | 175,316 | 173,717 | -1,599 | 0.8301 | 0.8626 | +0.0325 |
| SOUTH CAROLINA | 144,274 | 129,552 | -14,722 | 0.6831 | 0.6433 | -0.0398 |
| SOUTH DAKOTA | 53,503 | 65,463 | +11,960 | 0.2533 | 0.3250 | +0.0717 |
| TENNESSEE | 327,468 | 300,625 | -26,835 | 1.5505 | 1.4928 | -0.0577 |
| TEXAS | 549,469 | 833,188 | +283,719 | 2.6017 | 4.1374 | +1.5356 |
| UTAH | 95,287 | 94,246 | -981 | 0.4507 | 0.4679 | +0.0172 |
| VERMONT | 96,946 | 84,447 | -12,499 | 0.4590 | 0.4193 | -0.0396 |
| VIRGINIA | 529,515 | 483,806 | -45,709 | 2.5072 | 2.4024 | -0.1048 |
| WASHINGTON | 444,037 | 445,478 | +1,441 | 2.1972 | 2.2119 | +0.1147 |
| WEST VIRGINIA | 349,558 | 358,114 | +8,556 | 1.6551 | 1.7783 | +0.1231 |
| WISCONSIN | 833,319 | 517,522 | -315,797 | 3.9457 | 2.5698 | -1.3759 |
| WYOMING | 37,526 | 39,736 | +2,210 | 0.1776 | 0.1973 | +0.0196 |
| AMERICAN SAMOA | 16,902 | 13,847 | -3,055 | 0.0800 | 0.0687 | -0.0112 |
| GUAM | 20,252 | 8,487 | -11,765 | 0.0958 | 0.0421 | -0.0537 |
| MARIANAS GROUP | 11,198 | 9,863 | -1,335 | 0.0530 | 0.0489 | -0.0040 |
| PUERTO RICO | 261,544 | 174,087 | -87,457 | 1.2384 | 0.8644 | -0.3739 |
| PAC. TR. TERR. | 35,466 | 40,934 | +5,468 | 0.1679 | 0.2032 | +0.0353 |
| VIRGIN ISLANDS | 18,790 | 10,978 | -7,812 | 0.0889 | 0.0545 | -0.0344 |
| U.S. TOTALS | 21,119,152 | 20,137,856 | -981,296 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 10

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
TO ACHIEVE MORE STRINGENT TREATEMENT LEVELS
THOUSANDS OF 1982 DOLLARS
CATEGORIES IIA & IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 33,929 | 80,257 | +46,328 | 0.8219 | 2.1261 | +1.3042 |
| ALASKA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| ARIZONA | 0 | 453 | +453 | 0.0000 | 0.0119 | +0.0119 |
| ARKANSAS | 10,407 | 20,685 | +10,278 | 0.2521 | 0.5479 | +0.2958 |
| CALIFORNIA | 48,486 | 50,437 | +1,951 | 1.1745 | 1.3361 | +0.1616 |
| COLORADO | 7,610 | 3,958 | -3,652 | 0.1843 | 0.1048 | -0.0794 |
| CONNECTICUT | 59,766 | 44,311 | -15,455 | 1.4477 | 1.1738 | -0.2738 |
| DELAWARE | 4,735 | 4,513 | -222 | 0.1147 | 0.1195 | +0.0048 |
| DIST. OF COLUM. | 0 | 9,036 | +9,036 | 0.0000 | 0.2393 | +0.2393 |
| FLORIDA | 230,281 | 141,526 | -88,755 | 5.5783 | 3.7492 | -1.8290 |
| GEORGIA | 70,939 | 129,171 | +58,232 | 1.7184 | 3.4219 | +1.7035 |
| HAWAII | 7,953 | 0 | -7,953 | 0.1926 | 0.0000 | -0.1925 |
| IDAHO | 27,999 | 4,760 | -23,239 | 0.6782 | 0.1260 | -0.5521 |
| ILLINOIS | 1,011,338 | 507,644 | -503,694 | 24.4989 | 13.4483 | -11.0505 |
| INDIANA | 174,776 | 109,931 | -64,845 | 4.2338 | 2.9122 | -1.3215 |
| IOWA | 52,408 | 76,880 | +24,472 | 1.2695 | 2.0366 | +0.7671 |
| KANSAS | 5,804 | 150 | -5,654 | 0.1405 | 0.0039 | -0.1365 |
| KENTUCKY | 46,168 | 84,184 | +38,016 | 1.1183 | 2.2301 | +1.1118 |
| LOUISIANA | 3,362 | 6,575 | +3,213 | 0.0814 | 0.1741 | +0.0927 |
| MAINE | 2,816 | 2,291 | -525 | 0.0682 | 0.0606 | -0.0075 |
| MARYLAND | 415,766 | 227,457 | -188,309 | 10.0716 | 6.0257 | -4.0458 |
| MASSACHUSETTS | 57,239 | 103,482 | +46,243 | 1.3865 | 2.7414 | +1.3549 |
| MICHIGAN | 62,335 | 223,297 | +160,962 | 1.5100 | 5.9155 | +4.4055 |
| MINNESOTA | 147,853 | 75,213 | -72,640 | 3.5816 | 1.9925 | -1.5490 |
| MISSISSIPPI | 42,507 | 45,488 | +2,981 | 1.0297 | 1.2050 | +0.1753 |
| MISSOURI | 932 | 1,963 | +1,031 | 0.0225 | 0.0519 | +0.0295 |
| MONTANA | 121 | 1,322 | +1,201 | 0.0029 | 0.0350 | +0.0321 |
| NEBRASKA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| NEVADA | 34,008 | 24,335 | -9,673 | 0.8238 | 0.6446 | -0.1791 |
| NEW HAMPSHIRE | 11,711 | 4,823 | -6,888 | 0.2836 | 0.1277 | -0.1558 |
| NEW JERSEY | 169,598 | 278,876 | +108,878 | 4.1180 | 7.3879 | +3.2699 |
| NEW MEXICO | 646 | 845 | +199 | 0.0156 | 0.0223 | +0.0067 |
| NEW YORK | 60,891 | 179,019 | +118,128 | 1.4750 | 4.7425 | +3.2675 |
| NORTH CAROLINA | 148,423 | 126,726 | -21,697 | 3.5954 | 3.3571 | -0.2382 |
| NORTH DAKOTA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| OHIO | 459,195 | 462,675 | +3,480 | 11.1236 | 12.2570 | +1.1334 |
| OKLAHOMA | 11,078 | 5,970 | -5,108 | 0.2683 | 0.1581 | -0.1101 |
| OREGON | 34,190 | 21,437 | -12,753 | 0.8282 | 0.5678 | -0.2603 |
| PENNSYLVANIA | 187,863 | 184,123 | -3,740 | 4.5508 | 4.8777 | +0.3269 |
| RHODE ISLAND | 33,790 | 12,382 | -21,408 | 0.8185 | 0.3280 | -0.4904 |
| SOUTH CAROLINA | 15,635 | 29,683 | +14,048 | 0.3787 | 0.7863 | +0.4076 |
| SOUTH DAKOTA | 24,476 | 8,719 | -15,757 | 0.5929 | 0.2309 | -0.3619 |
| TENNESSEE | 122,452 | 127,680 | +5,228 | 2.9663 | 3.3824 | +0.4161 |
| TEXAS | 53,663 | 99,213 | +45,550 | 1.2999 | 2.6283 | +1.3284 |
| UTAH | 104,713 | 37,666 | -67,047 | 2.5365 | 0.9978 | -1.5386 |
| VERMONT | 11,251 | 20,371 | +9,120 | 0.2725 | 0.5396 | +0.2671 |
| VIRGINIA | 11,718 | 64,316 | +52,598 | 0.2838 | 1.7038 | +1.4200 |
| WASHINGTON | 7,079 | 16,846 | +9,767 | 0.1714 | 0.4462 | +0.2748 |
| WEST VIRGINIA | 9,633 | 20,413 | +10,780 | 0.2333 | 0.5407 | +0.3074 |
| WISCONSIN | 84,989 | 86,014 | +1,045 | 2.0583 | 2.2786 | +0.2203 |
| WYOMING | 858 | 3,442 | +2,584 | 0.0207 | 0.0911 | +0.0704 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| MARIANAS GROUP | 0 | 1,061 | +1,061 | 0.0000 | 0.0280 | +0.0280 |
| PUERTO RICO | 4,325 | 2,717 | -1,608 | 0.1047 | 0.0719 | -0.0327 |
| PAC. TR. TERR. | 0 | 419 | +419 | 0.0000 | 0.0110 | +0.0110 |
| VIRGIN ISLANDS | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| U.S. TOTALS | 4,128,895 | 3,774,755 | -353,340 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONNECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 89,477 | 87,705 | -1,772 | 3.1421 | 3.4394 | +0.2973 |
| ALASKA | 28,112 | 2,218 | -25,894 | 0.9872 | 0.0869 | -0.9002 |
| ARIZONA | 934 | 1,050 | +116 | 0.0327 | 0.0411 | +0.0084 |
| ARKANSAS | 31,623 | 18,538 | -13,085 | 1.1105 | 0.7269 | -0.3835 |
| CALIFORNIA | 59,083 | 61,869 | +2,786 | 2.0748 | 2.4262 | +0.3514 |
| COLORADO | 11,822 | 5,919 | -5,903 | 0.4151 | 0.2321 | -0.1829 |
| CONNECTICUT | 13,302 | 23,557 | +10,255 | 0.4671 | 0.9237 | +0.4567 |
| DELAWARE | 4,083 | 941 | -3,142 | 0.1433 | 0.0368 | -0.1065 |
| DIST. OF COLUM. | 17,291 | 6,473 | -10,818 | 0.6072 | 0.2538 | -0.3533 |
| FLORIDA | 102,881 | 77,471 | -24,530 | 3.5819 | 3.0380 | -0.5438 |
| GEORGIA | 100,721 | 93,295 | -7,426 | 3.5370 | 3.6586 | +0.1216 |
| HAWAII | 17 | 0 | -17 | 0.0005 | 0.0000 | -0.0004 |
| IDAHO | 19,010 | 7,044 | -11,966 | 0.6675 | 0.2762 | -0.3912 |
| ILLINOIS | 207,428 | 178,003 | -29,425 | 7.2842 | 6.9804 | -0.3036 |
| INDIANA | 47,034 | 47,577 | +543 | 1.6516 | 1.8657 | +0.2141 |
| IOWA | 112,056 | 85,729 | -26,327 | 3.9350 | 3.3619 | -0.5730 |
| KANSAS | 63,428 | 49,056 | -14,372 | 2.2274 | 1.9237 | -0.3036 |
| KENTUCKY | 99,352 | 104,413 | +5,061 | 3.4889 | 4.0946 | +0.6057 |
| LOUISIANA | 59,365 | 76,993 | +17,628 | 2.0847 | 3.0193 | +0.9346 |
| MAINE | 14,653 | 17,973 | +3,320 | 0.5145 | 0.7048 | +0.1903 |
| MARYLAND | 12,500 | 13,649 | +1,149 | 0.4389 | 0.5352 | +0.0963 |
| MASSACHUSETTS | 14,356 | 20,528 | +6,172 | 0.5041 | 0.8050 | +0.3009 |
| MICHIGAN | 69,081 | 73,260 | +4,179 | 2.4259 | 2.8729 | +0.4470 |
| MINNESOTA | 42,289 | 28,485 | -13,804 | 1.4850 | 1.1170 | -0.3679 |
| MISSISSIPPI | 126,448 | 55,271 | -71,177 | 4.4404 | 2.1674 | -2.2729 |
| MISSOURI | 47,596 | 37,624 | -9,972 | 1.6714 | 1.4754 | -0.1959 |
| MONTANA | 1,784 | 1,459 | -325 | 0.0626 | 0.0572 | -0.0053 |
| NEBRASKA | 1,087 | 637 | -450 | 0.0381 | 0.0249 | -0.0131 |
| NEVADA | 2,698 | 2,560 | -138 | 0.0947 | 0.1003 | +0.0056 |
| NEW HAMPSHIRE | 9,595 | 9,523 | -72 | 0.3369 | 0.3734 | +0.0365 |
| NEW JERSEY | 121,494 | 226,954 | +105,460 | 4.2665 | 8.9001 | +4.6336 |
| NEW MEXICO | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| NEW YORK | 110,688 | 186,068 | +75,380 | 3.8870 | 7.2967 | +3.4097 |
| NORTH CAROLINA | 97,715 | 84,234 | -13,481 | 3.4314 | 3.3032 | -0.1281 |
| NORTH DAKOTA | 572 | 441 | -131 | 0.0200 | 0.0172 | -0.0027 |
| OHIO | 255,301 | 134,776 | -120,525 | 8.9654 | 5.2853 | -3.6800 |
| OKLAHOMA | 44,839 | 13,904 | -30,935 | 1.5746 | 0.5452 | -1.0293 |
| OREGON | 49,645 | 71,071 | +21,426 | 1.7433 | 2.7870 | +1.0437 |
| PENNSYLVANIA | 17,858 | 15,837 | -2,013 | 0.6268 | 0.6210 | -0.0057 |
| RHODE ISLAND | 2,754 | 2,771 | +17 | 0.0967 | 0.1086 | +0.0119 |
| SOUTH CAROLINA | 69,370 | 76,292 | +6,922 | 2.4360 | 2.9918 | +0.5558 |
| SOUTH DAKOTA | 4,947 | 2,606 | -2,341 | 0.1737 | 0.1021 | -0.0715 |
| TENNESSEE | 153,577 | 153,673 | +96 | 5.3931 | 6.0263 | +0.6332 |
| TEXAS | 199,888 | 181,791 | -18,097 | 7.0194 | 7.1290 | +0.1096 |
| UTAH | 36,456 | 11,450 | -25,106 | 1.2837 | 0.4490 | -0.8346 |
| VERMONT | 2,388 | 7,640 | +5,252 | 0.0838 | 0.2995 | +0.2157 |
| VIRGINIA | 18,334 | 18,199 | -135 | 0.6438 | 0.7136 | +0.0698 |
| WASHINGTON | 110,975 | 115,894 | +4,919 | 3.8971 | 4.5448 | +0.6477 |
| WEST VIRGINIA | 2,075 | 4,423 | +2,348 | 0.0728 | 0.1734 | +0.1006 |
| WISCONSIN | 112,543 | 32,048 | -80,495 | 3.9521 | 1.2567 | -2.6953 |
| WYOMING | 6,936 | 1,426 | -5,510 | 0.2435 | 0.0559 | -0.1875 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 825 | 922 | +97 | 0.0289 | 0.0361 | +0.0072 |
| MARIANAS GROUP | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| PUERTO RICO | 19,969 | 18,613 | -1,356 | 0.7012 | 0.7299 | +0.0287 |
| PAC. TR. TERR. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VIRGIN ISLANDS | 158 | 148 | -10 | 0.0055 | 0.0057 | +0.0002 |
| U.S. TOTALS | 2,847,625 | 2,550,001 | -297,624 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 12

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1982 DOLLARS
CATEGORY III B

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 4,884 | 4,614 | +530 | 0.0608 | 0.0983 | +0.0383 |
| ALASKA | 109 | 189 | +8 | 0.0016 | 0.0023 | +0.0007 |
| ARIZONA | 364 | 39 | -325 | 0.0053 | 0.0008 | -0.0044 |
| ARKANSAS | 3,002 | 2,236 | -766 | 0.0441 | 0.0476 | +0.0035 |
| CALIFORNIA | 193,914 | 156,111 | -37,803 | 2.8495 | 3.3278 | +0.4783 |
| COLORADO | 124,566 | 1,262 | -123,304 | 1.8304 | 0.0268 | -1.8036 |
| CONNECTICUT | 16,324 | 16,634 | +310 | 0.2398 | 0.3545 | +0.1147 |
| DELAWARE | 1,549 | 2,328 | +779 | 0.0227 | 0.0496 | +0.0269 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 10 | 0 | -10 | 0.0001 | 0.0000 | +0.0000 |
| GEORGIA | 9,287 | 14,583 | +5,296 | 0.1364 | 0.3108 | +0.1744 |
| HAWAII | 0 | 17,213 | +17,213 | 0.0000 | 0.3669 | +0.3669 |
| IDAHO | 436 | 2,224 | +1,788 | 0.0064 | 0.0473 | +0.0409 |
| ILLINOIS | 11,205 | 55,345 | +44,140 | 0.1646 | 1.1798 | +1.0152 |
| INDIANA | 22,660 | 3,027 | -19,633 | 0.3329 | 0.0645 | -0.2683 |
| IOWA | 1,320 | 1,323 | +3 | 0.0193 | 0.0281 | +0.0088 |
| KANSAS | 22,532 | 21,670 | -862 | 0.3311 | 0.4619 | +0.1308 |
| KENTUCKY | 9,428 | 5,255 | -4,173 | 0.1385 | 0.1120 | -0.0264 |
| LOUISIANA | 12,905 | 15,692 | +2,787 | 0.1896 | 0.3345 | +0.1449 |
| MAINE | 7,565 | 6,351 | -1,214 | 0.1111 | 0.1353 | +0.0242 |
| MARYLAND | 1,846,323 | 130,750 | -1,715,573 | 27.1314 | 2.7872 | -24.3441 |
| MASSACHUSETTS | 123,172 | 18,384 | -104,788 | 1.8099 | 0.3918 | -1.4180 |
| MICHIGAN | 87,623 | 99,451 | +11,828 | 1.2876 | 2.1200 | +0.8324 |
| MINNESOTA | 32,614 | 17,081 | -15,533 | 0.4792 | 0.3641 | -0.1150 |
| MISSISSIPPI | 0 | 947 | +947 | 0.0000 | 0.0201 | +0.0201 |
| MISSOURI | 36,558 | 49,478 | +12,920 | 0.5372 | 1.0547 | +0.5175 |
| MONTANA | 598 | 124 | -474 | 0.0087 | 0.0026 | -0.0060 |
| NEBRASKA | 1,315 | 1,316 | +1 | 0.0193 | 0.0280 | +0.0087 |
| NEVADA | 3,138 | 3,892 | +754 | 0.0461 | 0.0829 | +0.0368 |
| NEW HAMPSHIRE | 5,804 | 4,773 | -1,031 | 0.0852 | 0.1017 | +0.0165 |
| NEW JERSEY | 1,903 | 2,277 | +374 | 0.0279 | 0.0485 | +0.0206 |
| NEW MEXICO | 312 | 89 | -223 | 0.0045 | 0.0018 | -0.0026 |
| NEW YORK | 3,829,310 | 3,759,523 | -69,787 | 56.2711 | 80.1432 | +23.8721 |
| NORTH CAROLINA | 0 | 314 | +314 | 0.0000 | 0.0066 | +0.0066 |
| NORTH DAKOTA | 0 | 88 | +88 | 0.0000 | 0.0018 | +0.0018 |
| OHIO | 13,258 | 21,394 | +8,136 | 0.1948 | 0.4560 | +0.2612 |
| OKLAHOMA | 28,485 | 9,928 | -18,557 | 0.4185 | 0.2116 | -0.2068 |
| OREGON | 57,362 | 17,604 | -39,758 | 0.8429 | 0.3752 | -0.4676 |
| PENNSYLVANIA | 909 | 545 | -364 | 0.0133 | 0.0116 | -0.0016 |
| RHODE ISLAND | 29,934 | 29,963 | +29 | 0.4398 | 0.6387 | +0.1989 |
| SOUTH CAROLINA | 624 | 0 | -624 | 0.0091 | 0.0000 | -0.0090 |
| SOUTH DAKOTA | 1,888 | 721 | -1,167 | 0.0277 | 0.0153 | -0.0123 |
| TENNESSEE | 417 | 3,776 | +3,359 | 0.0061 | 0.0804 | +0.0743 |
| TEXAS | 120,029 | 29,520 | -90,509 | 1.7638 | 0.6292 | -1.1345 |
| UTAH | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VERMONT | 6,824 | 3,239 | -3,585 | 0.1002 | 0.0690 | -0.0311 |
| VIRGINIA | 14,031 | 2,185 | -13,846 | 0.2355 | 0.0465 | -0.1889 |
| WASHINGTON | 85,281 | 62,963 | -22,318 | 1.2531 | 1.3421 | +0.0890 |
| WEST VIRGINIA | 3,251 | 2,719 | -532 | 0.0477 | 0.0579 | +0.0102 |
| WISCONSIN | 18,894 | 79,662 | +61,568 | 0.2658 | 1.6981 | +1.4323 |
| WYOMING | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 0 | 370 | +370 | 0.0000 | 0.0078 | +0.0078 |
| MARIANAS GROUP | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| PUERTO RICO | 12,782 | 11,914 | -868 | 0.1878 | 0.2539 | +0.0661 |
| PAC. TR. TERR. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VIRGIN ISLANDS | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| U.S. TOTALS | 6,805,899 | 4,691,806 | -2,114,093 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 13

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV A

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 256,872 | 296,017 | +39,145 | 1.5142 | 1.7651 | +0.2509 |
| ALASKA | 40,965 | 84,304 | +43,339 | 0.2414 | 0.5027 | +0.2612 |
| ARIZONA | 104,196 | 133,197 | +29,001 | 0.6142 | 0.7942 | +0.1800 |
| ARKANSAS | 105,884 | 92,733 | -13,151 | 0.6241 | 0.5529 | -0.0711 |
| CALIFORNIA | 1,046,742 | 1,097,813 | +51,071 | 6.1704 | 6.5464 | +0.3760 |
| COLORADO | 16,918 | 19,335 | +2,417 | 0.0997 | 0.1152 | +0.0155 |
| CONNECTICUT | 462,225 | 550,599 | +88,374 | 2.7247 | 3.2833 | +0.5585 |
| DELAWARE | 29,874 | 32,471 | +2,597 | 0.1760 | 0.1936 | +0.0175 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 1,046,657 | 870,631 | -176,026 | 6.1699 | 5.1917 | -0.9781 |
| GEORGIA | 199,512 | 231,332 | +31,820 | 1.1760 | 1.3794 | +0.2033 |
| HAWAII | 210,024 | 191,273 | -18,751 | 1.2380 | 1.1405 | -0.0974 |
| IDAHO | 82,320 | 77,633 | -4,687 | 0.4852 | 0.4629 | -0.0223 |
| ILLINOIS | 177,866 | 180,562 | +2,696 | 1.0484 | 1.0767 | +0.0282 |
| INDIANA | 303,971 | 247,582 | -56,389 | 1.7918 | 1.4763 | -0.3154 |
| IOWA | 117,042 | 109,756 | -7,286 | 0.6899 | 0.6544 | -0.0354 |
| KANSAS | 103,160 | 97,378 | -5,782 | 0.6081 | 0.5806 | -0.0274 |
| KENTUCKY | 445,825 | 398,975 | -46,850 | 2.6280 | 2.3791 | -0.2489 |
| LOUISIANA | 310,956 | 333,519 | +22,563 | 1.8330 | 1.9888 | +0.1558 |
| MAINE | 206,350 | 196,784 | -9,566 | 1.2163 | 1.1729 | -0.0434 |
| MARYLAND | 216,560 | 225,835 | +9,275 | 1.2765 | 1.3466 | +0.0701 |
| MASSACHUSETTS | 883,742 | 806,891 | -76,871 | 5.2096 | 4.8116 | -0.3980 |
| MICHIGAN | 752,675 | 506,335 | -246,340 | 4.4369 | 3.0193 | -1.4175 |
| MINNESOTA | 136,473 | 128,527 | -7,946 | 0.8044 | 0.7664 | -0.0380 |
| MISSISSIPPI | 100,412 | 115,416 | +15,004 | 0.5919 | 0.6882 | +0.0963 |
| MISSOURI | 227,728 | 209,648 | -18,080 | 1.3424 | 1.2501 | -0.0922 |
| MONTANA | 11,376 | 34,503 | +23,127 | 0.0670 | 0.2057 | +0.1386 |
| NEBRASKA | 17,226 | 20,433 | +3,207 | 0.1015 | 0.1218 | +0.0202 |
| NEVADA | 35,108 | 33,407 | -1,701 | 0.2069 | 0.1992 | -0.0077 |
| NEW HAMPSHIRE | 292,229 | 264,286 | -27,943 | 1.7226 | 1.5759 | -0.1466 |
| NEW JERSEY | 656,251 | 440,860 | -215,391 | 3.8685 | 2.6289 | -1.2395 |
| NEW MEXICO | 33,673 | 37,537 | +3,864 | 0.1984 | 0.2238 | +0.0253 |
| NEW YORK | 2,383,212 | 2,327,122 | -56,090 | 14.0487 | 13.8770 | -0.1716 |
| NORTH CAROLINA | 378,337 | 404,450 | +26,113 | 2.2302 | 2.4118 | +0.1815 |
| NORTH DAKOTA | 2,514 | 2,793 | +279 | 0.0148 | 0.0166 | +0.0018 |
| OHIO | 663,582 | 669,428 | +5,846 | 3.9117 | 3.9919 | +0.0802 |
| OKLAHOMA | 116,219 | 84,926 | -31,293 | 0.6850 | 0.5064 | -0.1786 |
| OREGON | 265,387 | 313,923 | +48,536 | 1.5644 | 1.8719 | +0.3075 |
| PENNSYLVANIA | 1,189,620 | 1,315,303 | +125,683 | 7.0128 | 7.8434 | +0.8307 |
| RHODE ISLAND | 278,148 | 153,816 | -124,342 | 1.6396 | 0.9172 | -0.7224 |
| SOUTH CAROLINA | 211,504 | 266,934 | +55,430 | 1.2467 | 1.5917 | +0.3449 |
| SOUTH DAKOTA | 2,787 | 2,991 | +204 | 0.0164 | 0.0178 | +0.0014 |
| TENNESSEE | 344,712 | 398,512 | +53,800 | 2.0320 | 2.3763 | +0.3443 |
| TEXAS | 480,734 | 418,715 | -62,019 | 2.8338 | 2.4968 | -0.3369 |
| UTAH | 46,466 | 48,158 | +1,692 | 0.2739 | 0.2871 | +0.0132 |
| VERMONT | 74,136 | 69,119 | -5,017 | 0.4370 | 0.4121 | -0.0248 |
| VIRGINIA | 302,502 | 398,876 | +96,374 | 1.7832 | 2.3808 | +0.5976 |
| WASHINGTON | 415,213 | 528,597 | +113,384 | 2.4476 | 3.1521 | +0.7044 |
| WEST VIRGINIA | 532,961 | 699,961 | +167,000 | 3.1417 | 4.1739 | +1.0322 |
| WISCONSIN | 208,063 | 210,986 | +2,923 | 1.2264 | 1.2581 | +0.0316 |
| WYOMING | 892 | 2,943 | +2,051 | 0.0052 | 0.0175 | +0.0122 |
| AMERICAN SAMOA | 10,548 | 6,517 | -4,031 | 0.0621 | 0.0388 | -0.0233 |
| GUAM | 0 | 7,190 | +7,190 | 0.0000 | 0.0428 | +0.0428 |
| MARIANAS GROUP | 15,403 | 15,468 | +65 | 0.0907 | 0.0922 | +0.0014 |
| PUERTO RICO | 356,915 | 329,601 | -27,314 | 2.1039 | 1.9654 | -0.1385 |
| PAC. TR. TERR. | 37,560 | 23,693 | -13,867 | 0.2214 | 0.1412 | -0.0801 |
| VIRGIN ISLANDS | 15,611 | 12,008 | -3,603 | 0.0920 | 0.0715 | -0.0204 |
| U.S. TOTALS | 16,963,868 | 16,769,522 | -194,346 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE | 1980 BACKLOGS | 1982 BACKLOGS | CHANGE |
| ALABAMA | 56,595 | 73,843 | +17,248 | 0.5877 | 0.8265 | +0.2389 |
| ALASKA | 40,568 | 43,655 | +3,087 | 0.4213 | 0.4886 | +0.0673 |
| ARIZONA | 34,987 | 27,394 | -7,593 | 0.3633 | 0.3066 | -0.0566 |
| ARKANSAS | 31,345 | 31,877 | +10,532 | 0.2216 | 0.3568 | +0.1352 |
| CALIFORNIA | 788,883 | 286,404 | -502,479 | 8.1929 | 3.2060 | -4.9868 |
| COLORADO | 2,056 | 3,539 | +1,483 | 0.0213 | 0.0396 | +0.0183 |
| CONNECTICUT | 174,253 | 198,795 | +24,542 | 1.8097 | 2.2253 | +0.4156 |
| DELAWARE | 33,134 | 19,765 | -13,369 | 0.3441 | 0.2212 | -0.1228 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 281,245 | 370,602 | +89,357 | 2.9208 | 4.1485 | +1.2277 |
| GEORGIA | 113,187 | 123,851 | +10,664 | 1.1755 | 1.3863 | +0.2108 |
| HAWAII | 156,499 | 48,639 | -107,860 | 1.6253 | 0.5444 | -1.0808 |
| IDAHO | 26,234 | 28,210 | +1,976 | 0.2724 | 0.3157 | +0.0433 |
| ILLINOIS | 179,506 | 191,935 | +12,429 | 1.8642 | 2.1485 | +0.2843 |
| INDIANA | 115,380 | 107,875 | -7,505 | 1.1982 | 1.2075 | +0.0093 |
| IOWA | 101,686 | 56,938 | -44,748 | 1.0560 | 0.6373 | -0.4186 |
| KANSAS | 160,305 | 137,997 | -22,308 | 1.6648 | 1.5447 | -0.1200 |
| KENTUCKY | 113,518 | 161,303 | +47,785 | 1.1789 | 1.8056 | +0.6267 |
| LOUISIANA | 137,132 | 153,143 | +16,011 | 1.4241 | 1.7142 | +0.2901 |
| MAINE | 133,368 | 102,633 | -30,735 | 1.3850 | 1.1488 | -0.2361 |
| MARYLAND | 81,277 | 51,001 | -30,276 | 0.8441 | 0.5708 | -0.2731 |
| MASSACHUSETTS | 531,485 | 574,126 | +42,641 | 5.5197 | 6.4267 | +0.9070 |
| MICHIGAN | 488,707 | 479,866 | -8,841 | 5.0754 | 5.3716 | +0.2962 |
| MINNESOTA | 317,988 | 182,443 | -135,545 | 3.3024 | 2.0422 | -1.2601 |
| MISSISSIPPI | 74,947 | 61,897 | -13,050 | 0.7783 | 0.6928 | -0.0854 |
| MISSOURI | 447,712 | 326,511 | -121,201 | 4.6497 | 3.6549 | -0.9947 |
| MONTANA | 8,628 | 6,445 | -2,183 | 0.0896 | 0.0721 | -0.0174 |
| NEBRASKA | 11,443 | 7,042 | -4,401 | 0.1188 | 0.0788 | -0.0399 |
| NEVADA | 13,148 | 6,835 | -6,313 | 0.1365 | 0.0765 | -0.0599 |
| NEW HAMPSHIRE | 226,677 | 206,762 | -19,915 | 2.3541 | 2.3144 | -0.0396 |
| NEW JERSEY | 485,471 | 614,662 | +129,191 | 5.0418 | 6.8805 | +1.8387 |
| NEW MEXICO | 8,717 | 9,344 | +627 | 0.0905 | 0.1045 | +0.0140 |
| NEW YORK | 1,336,750 | 765,936 | -570,814 | 13.8828 | 8.5739 | -5.3088 |
| NORTH CAROLINA | 120,731 | 151,287 | +30,556 | 1.2538 | 1.6935 | +0.4397 |
| NORTH DAKOTA | 1,516 | 3,152 | +1,636 | 0.0157 | 0.0352 | +0.0195 |
| OHIO | 312,602 | 464,507 | +151,905 | 3.2465 | 5.1997 | +1.9532 |
| OKLAHOMA | 40,990 | 55,903 | +14,913 | 0.4257 | 0.6257 | +0.2000 |
| OREGON | 102,837 | 81,536 | -21,301 | 1.0680 | 0.9127 | -0.1552 |
| PENNSYLVANIA | 260,273 | 288,439 | +28,166 | 2.7030 | 3.2287 | +0.5258 |
| RHODE ISLAND | 114,638 | 77,427 | -37,211 | 1.1905 | 0.8667 | -0.3237 |
| SOUTH CAROLINA | 43,779 | 169,614 | +125,835 | 0.4546 | 1.8986 | +1.4440 |
| SOUTH DAKOTA | 2,640 | 4,831 | +2,191 | 0.0274 | 0.0540 | +0.0266 |
| TENNESSEE | 108,136 | 120,921 | +12,785 | 1.1230 | 1.3535 | +0.2305 |
| TEXAS | 203,575 | 469,223 | +265,648 | 2.1142 | 5.2524 | +3.1383 |
| UTAH | 26,155 | 17,742 | -8,413 | 0.2716 | 0.1985 | -0.0729 |
| VERMONT | 32,222 | 29,650 | -2,572 | 0.3346 | 0.3318 | -0.0027 |
| VIRGINIA | 324,947 | 230,486 | -99,461 | 3.4268 | 2.5800 | -0.8467 |
| WASHINGTON | 229,541 | 284,241 | +54,690 | 2.3840 | 3.1817 | +0.7978 |
| WEST VIRGINIA | 154,202 | 183,862 | +29,660 | 1.6014 | 2.0581 | +0.4567 |
| WISCONSIN | 477,774 | 546,112 | +68,338 | 4.9619 | 6.1131 | +1.1512 |
| WYOMING | 1,754 | 3,040 | +1,286 | 0.0182 | 0.0340 | +0.0158 |
| AMERICAN SAMOA | 28,975 | 15,870 | -13,105 | 0.3009 | 0.1776 | -0.1232 |
| GUAM | 1,916 | 1,564 | -352 | 0.0198 | 0.0176 | -0.0022 |
| MARIANAS GROUP | 15,615 | 13,165 | -2,450 | 0.1621 | 0.1473 | -0.0147 |
| PUERTO RICO | 298,030 | 245,679 | -52,351 | 3.0951 | 2.7501 | -0.3449 |
| PAC. TR. TERR. | 10,991 | 10,516 | -475 | 0.1141 | 0.1177 | +0.0036 |
| VIRGIN ISLANDS | 7,095 | 3,282 | -3,813 | 0.0736 | 0.0367 | -0.0368 |
| U.S. TOTALS | 9,628,795 | 8,933,317 | -695,478 | 100.0000 | 100.0000 | +0.0000 |

1982 EPA ASSESSMENT OF CATEGORY V NEEDS BY BASIS OF ESTIMATE
THOUSANDS OF 1982 DOLLARS

| STATE | AESTHETICS | PUBLIC HEALTH | FISH AND WILDLIFE | RECREATION | SEWER SEPARATION | FACILITIES PLAN | TOTAL |
|---|---|---|---|---|---|---|---|
| ALABAMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALASKA | 0 | 0 | 0 | 18,388 | 0 | 0 | 18,388 |
| ARIZONA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARKANSAS | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CALIFORNIA | 0 | 0 | 17,756 | 77,989 | 0 | 470,212 | 565,957 |
| COLORADO | 0 | 0 | 0 | 41,547 | 0 | 0 | 41,547 |
| CONNECTICUT | 0 | 0 | 0 | 752,263 | 23,009 | 0 | 775,272 |
| DELAWARE | 0 | 0 | 0 | 278,740 | 13,370 | 0 | 292,110 |
| DIST. OF COLUMBIA | 0 | 0 | 0 | 0 | 0 | 68,119 | 68,119 |
| FLORIDA | 0 | 0 | 0 | 8,526 | 0 | 0 | 8,526 |
| GEORGIA | 0 | 4,492 | 0 | 410,245 | 0 | 0 | 414,737 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 0 | 0 | 0 | 96,858 | 19,522 | 0 | 116,380 |
| ILLINOIS | 0 | 0 | 2,168 | 1,013,077 | 126,729 | 954,048 | 2,096,022 |
| INDIANA | 0 | 0 | 2,468,980 | 446,361 | 51,978 | 0 | 2,967,239 |
| IOWA | 0 | 0 | 76,157 | 350,183 | 252 | 0 | 426,592 |
| KANSAS | 0 | 0 | 393,061 | 0 | 0 | 0 | 393,061 |
| KENTUCKY | 0 | 0 | 0 | 1,450,892 | 0 | 0 | 1,450,892 |
| LOUISIANA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAINE | 0 | 0 | 341,119 | 212,924 | 275,519 | 0 | 829,562 |
| MARYLAND | 0 | 0 | 26,988 | 48,153 | 0 | 0 | 75,141 |
| MASSACHUSETTS | 0 | 0 | 398,146 | 1,573,211 | 19,017 | 0 | 1,990,374 |
| MICHIGAN | 0 | 0 | 2,061,805 | 1,944 | 86,190 | 8,318 | 2,157,457 |
| MINNESOTA | 0 | 0 | 40 | 293,286 | 26,269 | 1,126 | 320,721 |
| MISSISSIPPI | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MISSOURI | 2,705 | 0 | 658,846 | 385,281 | 0 | 604 | 1,047,436 |
| MONTANA | 0 | 1,620 | 0 | 162,399 | 0 | 0 | 164,019 |
| NEBRASKA | 31,737 | 0 | 0 | 41,046 | 0 | 0 | 72,783 |
| NEVADA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW HAMPSHIRE | 0 | 31 | 27,897 | 411,097 | 4,763 | 0 | 443,788 |
| NEW JERSEY | 0 | 0 | 1,367,215 | 612,607 | 35,672 | 0 | 2,015,494 |
| NEW MEXICO | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW YORK | 195,303 | 1,843,286 | 1,507,823 | 1,957,795 | 116,178 | 0 | 5,620,385 |
| NORTH CAROLINA | 0 | 0 | 2,943 | 0 | 0 | 0 | 2,943 |
| NORTH DAKOTA | 188 | 0 | 657 | 12,486 | 0 | 0 | 13,331 |
| OHIO | 0 | 0 | 339,695 | 2,921,034 | 618,002 | 0 | 3,878,731 |
| OKLAHOMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OREGON | 0 | 0 | 0 | 660,107 | 13,915 | 0 | 674,022 |
| PENNSYLVANIA | 0 | 0 | 2,458,014 | 132,505 | 55,594 | 0 | 2,646,113 |
| RHODE ISLAND | 0 | 0 | 177,612 | 0 | 0 | 0 | 177,612 |
| SOUTH CAROLINA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH DAKOTA | 0 | 0 | 40,151 | 3,746 | 0 | 0 | 43,897 |
| TENNESSEE | 0 | 0 | 0 | 346,840 | 0 | 0 | 346,840 |
| TEXAS | 0 | 0 | 21,429 | 0 | 0 | 0 | 21,429 |
| UTAH | 0 | 0 | 2,597 | 0 | 0 | 0 | 2,597 |
| VERMONT | 0 | 0 | 25,513 | 187,236 | 48,745 | 0 | 261,494 |
| VIRGINIA | 0 | 0 | 233,076 | 41,914 | 3,650 | 0 | 278,640 |
| WASHINGTON | 0 | 0 | 0 | 1,172,718 | 119,717 | 0 | 1,292,435 |
| WEST VIRGINIA | 0 | 0 | 0 | 813,366 | 354,189 | 0 | 1,167,555 |
| WISCONSIN | 0 | 0 | 0 | 369,650 | 0 | 0 | 369,650 |
| WYOMING | 0 | 0 | 0 | 18,687 | 0 | 0 | 18,687 |
| AMERICAN SAMOA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GUAM | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MARIANAS GROUP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PUERTO RICO | 0 | 0 | 171,557 | 0 | 0 | 0 | 171,557 |
| PAC. TR. TERR. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VIRGIN ISLANDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U.S. TOTALS | 229,933 | 1,849,429 | 12,820,365 | 17,325,101 | 2,012,280 | 1,502,427 | 35,739,535 |

DECEMBER 31, 1982
TABLE 16

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU IV

| | 1982 * BACKLOGS | 1980 POPULATION | DOLLARS PER PERSON (1980) | 2000 POPULATION | DOLLARS PER PERSON (2000) |
|---|---|---|---|---|---|
| ALABAMA | 800,647 | 3,890 | 205 | 4,140 | 193 |
| ALASKA | 230,873 | 400 | 577 | 694 | 332 |
| ARIZONA | 277,270 | 2,718 | 102 | 4,357 | 63 |
| ARKANSAS | 288,310 | 2,286 | 126 | 2,970 | 97 |
| CALIFORNIA | 2,638,685 | 23,669 | 111 | 26,786 | 98 |
| COLORADO | 151,755 | 2,889 | 52 | 4,371 | 34 |
| CONNECTICUT | 1,157,181 | 3,108 | 372 | 3,902 | 296 |
| DELAWARE | 79,974 | 595 | 134 | 841 | 95 |
| DIST. OF COLUM. | 15,509 | 638 | 24 | 694 | 22 |
| FLORIDA | 2,268,938 | 9,740 | 232 | 15,049 | 150 |
| GEORGIA | 854,674 | 5,464 | 156 | 7,053 | 121 |
| HAWAII | 333,987 | 965 | 346 | 1,366 | 244 |
| IDAHO | 207,267 | 944 | 219 | 1,183 | 175 |
| ILLINOIS | 1,435,815 | 11,418 | 125 | 12,358 | 116 |
| INDIANA | 737,378 | 5,490 | 134 | 6,059 | 121 |
| IOWA | 726,947 | 2,913 | 249 | 3,101 | 234 |
| KANSAS | 462,074 | 2,363 | 195 | 2,642 | 174 |
| KENTUCKY | 1,048,918 | 3,661 | 286 | 4,224 | 248 |
| LOUISIANA | 791,031 | 4,204 | 188 | 4,880 | 162 |
| MAINE | 490,936 | 1,125 | 436 | 1,222 | 401 |
| MARYLAND | 755,401 | 4,216 | 179 | 5,583 | 135 |
| MASSACHUSETTS | 2,757,337 | 5,737 | 480 | 6,736 | 409 |
| MICHIGAN | 2,365,984 | 9,258 | 255 | 10,314 | 229 |
| MINNESOTA | 784,948 | 4,077 | 192 | 4,505 | 174 |
| MISSISSIPPI | 509,129 | 2,521 | 201 | 2,760 | 185 |
| MISSOURI | 1,208,912 | 4,917 | 258 | 5,379 | 235 |
| MONTANA | 71,244 | 787 | 90 | 938 | 75 |
| NEBRASKA | 159,461 | 1,570 | 101 | 1,734 | 91 |
| NEVADA | 109,469 | 799 | 137 | 1,408 | 77 |
| NEW HAMPSHIRE | 715,555 | 921 | 776 | 1,306 | 547 |
| NEW JERSEY | 3,410,822 | 7,364 | 463 | 9,022 | 378 |
| NEW MEXICO | 121,219 | 1,300 | 93 | 1,781 | 68 |
| NEW YORK | 10,508,152 | 17,577 | 597 | 19,683 | 533 |
| NORTH CAROLINA | 1,067,162 | 5,874 | 181 | 7,419 | 143 |
| NORTH DAKOTA | 19,261 | 653 | 29 | 690 | 27 |
| OHIO | 2,446,629 | 10,797 | 226 | 12,237 | 199 |
| OKLAHOMA | 275,988 | 3,025 | 91 | 3,702 | 74 |
| OREGON | 600,329 | 2,633 | 228 | 3,299 | 182 |
| PENNSYLVANIA | 2,707,936 | 11,867 | 228 | 12,854 | 210 |
| RHODE ISLAND | 450,076 | 947 | 475 | 1,084 | 415 |
| SOUTH CAROLINA | 672,075 | 3,119 | 215 | 3,700 | 181 |
| SOUTH DAKOTA | 85,331 | 690 | 123 | 730 | 116 |
| TENNESSEE | 1,105,187 | 4,591 | 240 | 5,573 | 198 |
| TEXAS | 2,031,650 | 14,228 | 142 | 21,000 | 96 |
| UTAH | 209,262 | 1,461 | 143 | 1,963 | 106 |
| VERMONT | 214,466 | 511 | 419 | 607 | 353 |
| VIRGINIA | 1,189,868 | 5,346 | 222 | 6,755 | 176 |
| WASHINGTON | 1,474,119 | 4,130 | 356 | 4,859 | 303 |
| WEST VIRGINIA | 1,269,492 | 1,950 | 651 | 2,101 | 604 |
| WISCONSIN | 1,472,344 | 4,705 | 312 | 5,553 | 265 |
| WYOMING | 58,587 | 450 | 112 | 484 | 104 |
| AMERICAN SAMOA | 36,234 | 33 | 1,098 | 48 | 905 |
| GUAM | 18,533 | 110 | 168 | 275 | 67 |
| MARIANAS GROUP | 39,557 | 17 | 2,326 | 33 | 1,198 |
| PUERTO RICO | 782,611 | 3,197 | 244 | 4,700 | 166 |
| PAC. TR. TERR. | 75,562 | 118 | 640 | 183 | 412 |
| VIRGIN ISLANDS | 26,416 | 99 | 266 | 116 | 227 |
| U.S. TOTALS | 56,856,457 | 230,675 | 247 | 278,888 | 203 |

1982 NEEDS SURVEY

PER CAPITA BACKLOG ESTIMATE, CATEGORY V.

| STATE | 1982 EPA ASSESSMENT (THOUSAND $) | POPULATION SERVED (THOUSANDS) | PER CAPITA COST ($/PERSON) |
|---|---|---|---|
| ALABAMA | 0 | 0 | 0 |
| ALASKA | 18,388 | 5 | 3,784 |
| ARIZONA | 0 | 0 | 0 |
| ARKANSAS | 0 | 0 | 0 |
| CALIFORNIA | 565,957 | 852 | 664 |
| COLORADO | 41,547 | 148 | 281 |
| CONNECTICUT | 775,272 | 415 | 1,867 |
| DELAWARE | 292,110 | 90 | 3,243 |
| DIST. OF COLUMBIA | 68,119 | 489 | 139 |
| FLORIDA | 8,526 | 4 | 1,951 |
| GEORGIA | 414,737 | 330 | 1,256 |
| HAWAII | 0 | 0 | 0 |
| IDAHO | 116,388 | 46 | 2,529 |
| ILLINOIS | 2,096,022 | 5,195 | 403 |
| INDIANA | 2,947,239 | 2,510 | 1,182 |
| IOWA | 426,592 | 342 | 1,246 |
| KANSAS | 393,061 | 464 | 847 |
| KENTUCKY | 1,450,892 | 769 | 1,888 |
| LOUISIANA | 0 | 0 | 0 |
| MAINE | 829,562 | 391 | 2,123 |
| MARYLAND | 75,141 | 54 | 1,394 |
| MASSACHUSETTS | 1,990,374 | 1,830 | 1,088 |
| MICHIGAN | 2,157,457 | 2,600 | 830 |
| MINNESOTA | 320,721 | 530 | 605 |
| MISSISSIPPI | 0 | 0 | 0 |
| MISSOURI | 1,047,436 | 872 | 1,202 |
| MONTANA | 164,819 | 130 | 1,259 |
| NEBRASKA | 72,783 | 199 | 365 |
| NEVADA | 0 | 0 | 0 |
| NEW HAMPSHIRE | 443,788 | 283 | 1,567 |
| NEW JERSEY | 2,015,494 | 2,003 | 1,006 |
| NEW MEXICO | 0 | 0 | 0 |
| NEW YORK | 5,620,385 | 12,106 | 464 |
| NORTH CAROLINA | 2,943 | 8 | 368 |
| NORTH DAKOTA | 13,331 | 17 | 789 |
| OHIO | 3,878,731 | 2,700 | 1,437 |
| OKLAHOMA | 0 | 0 | 0 |
| OREGON | 674,022 | 245 | 2,751 |
| PENNSYLVANIA | 2,646,113 | 4,153 | 637 |
| RHODE ISLAND | 177,412 | 191 | 932 |
| SOUTH CAROLINA | 0 | 0 | 0 |
| SOUTH DAKOTA | 43,897 | 91 | 482 |
| TENNESSEE | 346,940 | 158 | 2,191 |
| TEXAS | 21,429 | 35 | 612 |
| UTAH | 2,597 | 4 | 680 |
| VERMONT | 261,494 | 128 | 2,038 |
| VIRGINIA | 278,640 | 537 | 519 |
| WASHINGTON | 1,292,435 | 637 | 2,027 |
| WEST VIRGINIA | 1,167,555 | 435 | 2,684 |
| WISCONSIN | 349,650 | 548 | 651 |
| WYOMING | 18,687 | 15 | 1,276 |
| AMERICAN SAMOA | 0 | 0 | 0 |
| GUAM | 0 | 0 | 0 |
| MARIANAS GROUP | 0 | 0 | 0 |
| PUERTO RICO | 171,557 | 600 | 286 |
| PAC. TR. TERR. | 0 | 0 | 0 |
| VIRGIN ISLANDS | 0 | 0 | 0 |
| U.S. TOTALS | 35,739,535 | 43,180 | 828 |

DECEMBER 31, 1982
TABLE 18

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CAT I, IIA, IIB, IIIA, & IVB

| | 1982 * BACKLOGS | 1980 POPULATION | DOLLARS PER PERSON (1980) | 2000 POPULATION | DOLLARS PER PERSON (2000) |
|---|---|---|---|---|---|
| ALABAMA | 500,016 | 3,890 | 128 | 4,140 | 120 |
| ALASKA | 146,468 | 400 | 366 | 694 | 211 |
| ARIZONA | 144,034 | 2,718 | 52 | 4,357 | 33 |
| ARKANSAS | 193,341 | 2,286 | 84 | 2,970 | 65 |
| CALIFORNIA | 1,384,761 | 23,669 | 58 | 26,786 | 51 |
| COLORADO | 131,158 | 2,889 | 45 | 4,371 | 30 |
| CONNECTICUT | 589,948 | 3,108 | 189 | 3,902 | 151 |
| DELAWARE | 45,175 | 595 | 75 | 841 | 53 |
| DIST. OF COLUM. | 15,589 | 638 | 24 | 694 | 22 |
| FLORIDA | 1,398,387 | 9,740 | 143 | 15,049 | 92 |
| GEORGIA | 608,759 | 5,464 | 111 | 7,053 | 86 |
| HAWAII | 125,581 | 965 | 130 | 1,366 | 91 |
| IDAHO | 127,410 | 944 | 134 | 1,183 | 107 |
| ILLINOIS | 1,199,988 | 11,418 | 105 | 12,358 | 97 |
| INDIANA | 486,769 | 5,490 | 88 | 6,059 | 80 |
| IOWA | 615,868 | 2,913 | 211 | 3,101 | 198 |
| KANSAS | 363,026 | 2,363 | 145 | 2,642 | 129 |
| KENTUCKY | 644,688 | 3,661 | 176 | 4,224 | 152 |
| LOUISIANA | 441,820 | 4,204 | 105 | 4,880 | 90 |
| MAINE | 287,881 | 1,125 | 255 | 1,222 | 235 |
| MARYLAND | 398,816 | 4,216 | 94 | 5,583 | 71 |
| MASSACHUSETTS | 1,932,062 | 5,737 | 336 | 6,736 | 286 |
| MICHIGAN | 1,760,178 | 9,258 | 190 | 10,314 | 170 |
| MINNESOTA | 639,340 | 4,077 | 156 | 4,505 | 141 |
| MISSISSIPPI | 392,766 | 2,521 | 155 | 2,740 | 143 |
| MISSOURI | 1,009,786 | 4,917 | 205 | 5,379 | 187 |
| MONTANA | 36,617 | 787 | 46 | 938 | 39 |
| NEBRASKA | 137,712 | 1,570 | 87 | 1,734 | 79 |
| NEVADA | 72,178 | 799 | 90 | 1,408 | 51 |
| NEW HAMPSHIRE | 446,496 | 921 | 484 | 1,306 | 341 |
| NEW JERSEY | 2,967,685 | 7,364 | 402 | 9,022 | 328 |
| NEW MEXICO | 83,593 | 1,308 | 64 | 1,781 | 46 |
| NEW YORK | 4,421,507 | 17,577 | 251 | 19,683 | 224 |
| NORTH CAROLINA | 662,398 | 5,874 | 112 | 7,419 | 89 |
| NORTH DAKOTA | 16,388 | 653 | 25 | 698 | 23 |
| OHIO | 1,755,807 | 10,797 | 162 | 12,237 | 143 |
| OKLAHOMA | 181,134 | 3,025 | 59 | 3,782 | 48 |
| OREGON | 268,802 | 2,633 | 102 | 3,209 | 83 |
| PENNSYLVANIA | 1,392,088 | 11,867 | 117 | 12,854 | 108 |
| RHODE ISLAND | 266,297 | 947 | 281 | 1,084 | 245 |
| SOUTH CAROLINA | 405,141 | 3,119 | 129 | 3,700 | 109 |
| SOUTH DAKOTA | 81,619 | 690 | 118 | 730 | 111 |
| TENNESSEE | 702,899 | 4,591 | 153 | 5,573 | 126 |
| TEXAS | 1,583,415 | 14,228 | 111 | 21,000 | 75 |
| UTAH | 141,104 | 1,461 | 116 | 1,963 | 82 |
| VERMONT | 142,108 | 511 | 278 | 607 | 234 |
| VIRGINIA | 796,807 | 5,346 | 149 | 6,755 | 117 |
| WASHINGTON | 882,559 | 4,130 | 213 | 4,859 | 181 |
| WEST VIRGINIA | 566,812 | 1,958 | 290 | 2,181 | 260 |
| WISCONSIN | 1,181,696 | 4,705 | 251 | 5,563 | 212 |
| WYOMING | 47,644 | 458 | 105 | 484 | 98 |
| AMERICAN SAMOA | 29,717 | 33 | 900 | 48 | 742 |
| GUAM | 10,973 | 110 | 99 | 275 | 39 |
| MARIANAS GROUP | 24,089 | 17 | 1,417 | 33 | 729 |
| PUERTO RICO | 441,096 | 3,197 | 137 | 4,700 | 93 |
| PAC. TR. TERR. | 51,869 | 118 | 439 | 183 | 283 |
| VIRGIN ISLANDS | 14,488 | 99 | 145 | 116 | 124 |
| U.S. TOTALS | 35,395,929 | 238,875 | 153 | 278,888 | 126 |

DECEMBER 31, 1982
TABLE 19

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I, IIA, & IIB

| | 1982 * BACKLOGS | 1980 POPULATION | DOLLARS PER PERSON (1980) | 2000 POPULATION | DOLLARS PER PERSON (2000) |
|---|---|---|---|---|---|
| ALABAMA | 338,468 | 3,890 | 87 | 4,140 | 81 |
| ALASKA | 100,587 | 400 | 251 | 694 | 144 |
| ARIZONA | 115,598 | 2,718 | 42 | 4,357 | 26 |
| ARKANSAS | 142,926 | 2,286 | 62 | 2,970 | 48 |
| CALIFORNIA | 1,036,488 | 23,669 | 43 | 26,786 | 38 |
| COLORADO | 121,700 | 2,889 | 42 | 4,371 | 27 |
| CONNECTICUT | 367,596 | 3,108 | 118 | 3,902 | 94 |
| DELAWARE | 24,469 | 595 | 41 | 841 | 29 |
| DIST. OF COLUM. | 9,036 | 638 | 14 | 694 | 13 |
| FLORIDA | 950,234 | 9,748 | 97 | 15,049 | 63 |
| GEORGIA | 391,613 | 5,464 | 71 | 7,053 | 55 |
| HAWAII | 76,862 | 965 | 79 | 1,366 | 56 |
| IDAHO | 92,156 | 944 | 97 | 1,183 | 77 |
| ILLINOIS | 829,978 | 11,418 | 72 | 12,358 | 67 |
| INDIANA | 331,317 | 5,490 | 60 | 6,059 | 54 |
| IOWA | 473,201 | 2,913 | 162 | 3,101 | 152 |
| KANSAS | 155,973 | 2,363 | 66 | 2,642 | 59 |
| KENTUCKY | 378,972 | 3,661 | 103 | 4,224 | 89 |
| LOUISIANA | 211,684 | 4,204 | 50 | 4,880 | 43 |
| MAINE | 167,275 | 1,125 | 148 | 1,222 | 136 |
| MARYLAND | 334,166 | 4,216 | 79 | 5,543 | 59 |
| MASSACHUSETTS | 1,337,408 | 5,737 | 233 | 6,736 | 198 |
| MICHIGAN | 1,207,052 | 9,258 | 130 | 10,314 | 117 |
| MINNESOTA | 428,412 | 4,077 | 105 | 4,505 | 95 |
| MISSISSIPPI | 275,598 | 2,521 | 109 | 2,748 | 100 |
| MISSOURI | 645,651 | 4,917 | 131 | 5,379 | 120 |
| MONTANA | 28,713 | 787 | 36 | 938 | 30 |
| NEBRASKA | 130,833 | 1,570 | 82 | 1,734 | 74 |
| NEVADA | 62,775 | 799 | 78 | 1,408 | 44 |
| NEW HAMPSHIRE | 230,211 | 921 | 249 | 1,306 | 176 |
| NEW JERSEY | 2,126,869 | 7,364 | 288 | 9,022 | 235 |
| NEW MEXICO | 74,249 | 1,300 | 57 | 1,781 | 41 |
| NEW YORK | 3,469,503 | 17,577 | 197 | 19,683 | 176 |
| NORTH CAROLINA | 426,877 | 5,874 | 72 | 7,419 | 57 |
| NORTH DAKOTA | 12,787 | 653 | 19 | 698 | 18 |
| OHIO | 1,156,524 | 10,797 | 107 | 12,237 | 94 |
| OKLAHOMA | 111,327 | 3,025 | 36 | 3,782 | 30 |
| OREGON | 116,195 | 2,633 | 44 | 3,209 | 36 |
| PENNSYLVANIA | 1,087,812 | 11,867 | 91 | 12,854 | 84 |
| RHODE ISLAND | 146,099 | 947 | 196 | 1,084 | 171 |
| SOUTH CAROLINA | 159,235 | 3,119 | 51 | 3,788 | 43 |
| SOUTH DAKOTA | 74,182 | 690 | 107 | 730 | 101 |
| TENNESSEE | 428,305 | 4,591 | 93 | 5,573 | 76 |
| TEXAS | 932,401 | 14,228 | 65 | 21,088 | 44 |
| UTAH | 131,912 | 1,461 | 90 | 1,963 | 67 |
| VERMONT | 104,618 | 511 | 205 | 607 | 172 |
| VIRGINIA | 548,122 | 5,346 | 102 | 6,755 | 81 |
| WASHINGTON | 482,424 | 4,138 | 116 | 4,859 | 99 |
| WEST VIRGINIA | 378,527 | 1,950 | 194 | 2,101 | 180 |
| WISCONSIN | 603,536 | 4,705 | 128 | 5,553 | 108 |
| WYOMING | 43,178 | 450 | 95 | 484 | 89 |
| AMERICAN SAMOA | 13,847 | 33 | 419 | 40 | 346 |
| GUAM | 8,487 | 110 | 77 | 275 | 30 |
| MARIANAS GROUP | 10,924 | 17 | 642 | 33 | 331 |
| PUERTO RICO | 176,804 | 3,197 | 55 | 4,700 | 37 |
| PAC. TR. TERR. | 41,353 | 118 | 350 | 183 | 225 |
| VIRGIN ISLANDS | 10,978 | 99 | 110 | 116 | 94 |
| U.S. TOTALS | 23,912,611 | 238,075 | 183 | 278,888 | 85 |

DECEMBER 31, 1982
TABLE 20

1982 NEEDS SURVEY

CURRENT PER CAPITA BACKLOG COSTS BY CATEGORY
(DOLLARS PER PERSON)

CATEGORIES I THRU IV

| | TOTAL | I | IIA | IIB | III A | III B | IV A | IV B |
|---|---|---|---|---|---|---|---|---|
| ALABAMA | 205 | 66 | 16 | 3 | 22 | 1 | 76 | 18 |
| ALASKA | 577 | 251 | 0 | 0 | 5 | 0 | 210 | 109 |
| ARIZONA | 102 | 42 | 0 | 0 | 0 | 0 | 49 | 10 |
| ARKANSAS | 126 | 53 | 7 | 1 | 8 | 0 | 48 | 13 |
| CALIFORNIA | 111 | 41 | 1 | 1 | 2 | 6 | 46 | 12 |
| COLORADO | 52 | 40 | 1 | 0 | 2 | 0 | 6 | 1 |
| CONNECTICUT | 372 | 104 | 12 | 1 | 7 | 5 | 177 | 63 |
| DELAWARE | 134 | 33 | 7 | 0 | 1 | 3 | 57 | 33 |
| DIST. OF COLUM. | 24 | 0 | 0 | 14 | 10 | 0 | 0 | 0 |
| FLORIDA | 232 | 83 | 7 | 7 | 7 | 0 | 89 | 38 |
| GEORGIA | 156 | 48 | 23 | 0 | 17 | 2 | 42 | 22 |
| HAWAII | 346 | 79 | 0 | 0 | 0 | 17 | 198 | 50 |
| IDAHO | 219 | 92 | 4 | 0 | 7 | 2 | 82 | 29 |
| ILLINOIS | 125 | 28 | 44 | 0 | 15 | 4 | 15 | 16 |
| INDIANA | 134 | 48 | 19 | 0 | 8 | 0 | 45 | 19 |
| IOWA | 249 | 136 | 26 | 0 | 29 | 0 | 37 | 19 |
| KANSAS | 195 | 65 | 0 | 0 | 20 | 9 | 41 | 58 |
| KENTUCKY | 286 | 88 | 22 | 0 | 28 | 1 | 108 | 44 |
| LOUISIANA | 188 | 48 | 1 | 0 | 18 | 3 | 79 | 36 |
| MAINE | 436 | 146 | 1 | 0 | 15 | 5 | 174 | 91 |
| MARYLAND | 179 | 25 | 53 | 0 | 3 | 31 | 53 | 12 |
| MASSACHUSETTS | 480 | 215 | 14 | 3 | 3 | 3 | 140 | 108 |
| MICHIGAN | 255 | 106 | 21 | 3 | 7 | 10 | 54 | 51 |
| MINNESOTA | 192 | 86 | 15 | 3 | 6 | 4 | 31 | 44 |
| MISSISSIPPI | 201 | 91 | 16 | 1 | 21 | 0 | 45 | 24 |
| MISSOURI | 258 | 130 | 0 | 0 | 7 | 10 | 42 | 66 |
| MONTANA | 90 | 34 | 1 | 0 | 1 | 0 | 43 | 8 |
| NEBRASKA | 101 | 82 | 0 | 0 | 0 | 0 | 13 | 4 |
| NEVADA | 137 | 48 | 22 | 0 | 3 | 4 | 41 | 0 |
| NEW HAMPSHIRE | 774 | 244 | 2 | 2 | 10 | 5 | 286 | 224 |
| NEW JERSEY | 463 | 250 | 24 | 13 | 30 | 0 | 59 | 83 |
| NEW MEXICO | 93 | 56 | 0 | 0 | 0 | 0 | 28 | 7 |
| NEW YORK | 597 | 187 | 6 | 3 | 10 | 213 | 132 | 43 |
| NORTH CAROLINA | 181 | 51 | 16 | 5 | 14 | 0 | 68 | 25 |
| NORTH DAKOTA | 29 | 19 | 0 | 0 | 0 | 0 | 6 | 4 |
| OHIO | 224 | 64 | 36 | 6 | 12 | 1 | 62 | 43 |
| OKLAHOMA | 91 | 34 | 1 | 0 | 4 | 3 | 28 | 18 |
| OREGON | 228 | 35 | 7 | 0 | 26 | 6 | 119 | 30 |
| PENNSYLVANIA | 228 | 76 | 14 | 1 | 1 | 0 | 110 | 24 |
| RHODE ISLAND | 675 | 183 | 13 | 0 | 2 | 31 | 162 | 81 |
| SOUTH CAROLINA | 215 | 41 | 8 | 1 | 24 | 0 | 85 | 54 |
| SOUTH DAKOTA | 123 | 94 | 11 | 1 | 3 | 1 | 6 | 7 |
| TENNESSEE | 248 | 85 | 27 | 0 | 33 | 0 | 86 | 26 |
| TEXAS | 142 | 58 | 6 | 0 | 12 | 2 | 29 | 32 |
| UTAH | 143 | 64 | 25 | 0 | 7 | 0 | 32 | 12 |
| VERMONT | 419 | 165 | 38 | 1 | 14 | 6 | 135 | 59 |
| VIRGINIA | 222 | 98 | 6 | 5 | 3 | 0 | 73 | 43 |
| WASHINGTON | 356 | 112 | 8 | 3 | 28 | 15 | 127 | 68 |
| WEST VIRGINIA | 451 | 183 | 9 | 8 | 2 | 1 | 358 | 94 |
| WISCONSIN | 312 | 109 | 18 | 0 | 6 | 16 | 44 | 116 |
| WYOMING | 112 | 88 | 7 | 0 | 3 | 0 | 6 | 6 |
| AMERICAN SAMOA | 1,098 | 419 | 0 | 0 | 0 | 0 | 197 | 480 |
| GUAM | 168 | 77 | 0 | 0 | 8 | 3 | 65 | 14 |
| MARIANAS GROUP | 2,326 | 580 | 62 | 0 | 0 | 0 | 909 | 774 |
| PUERTO RICO | 244 | 54 | 0 | 0 | 5 | 3 | 103 | 76 |
| PAC. TR. TERR. | 648 | 346 | 3 | 0 | 0 | 0 | 280 | 89 |
| VIRGIN ISLANDS | 244 | 110 | 0 | 0 | 1 | 0 | 121 | 33 |
| U.S. AVERAGE | 247 | 87 | 14 | 2 | 11 | 20 | 72 | 38 |

DECEMBER 31, 1982
TABLE 21

1982 NEEDS SURVEY

1982 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU IV

| | TOTAL | I | IIA | IIB | III A | III B | IV A | IV B |
|---|---|---|---|---|---|---|---|---|
| ALABAMA | 1,176 | 361 | 82 | 24 | 88 | 4 | 355 | 260 |
| ALASKA | 396 | 180 | 0 | 0 | 2 | 0 | 98 | 115 |
| ARIZONA | 623 | 280 | 0 | 2 | 1 | 0 | 188 | 150 |
| ARKANSAS | 557 | 269 | 30 | 6 | 18 | 2 | 126 | 104 |
| CALIFORNIA | 5,029 | 2,435 | 72 | 71 | 61 | 156 | 1,487 | 745 |
| COLORADO | 509 | 312 | 15 | 0 | 5 | 1 | 28 | 145 |
| CONNECTICUT | 1,404 | 363 | 55 | 4 | 23 | 16 | 686 | 254 |
| DELAWARE | 144 | 42 | 20 | 0 | 0 | 2 | 41 | 37 |
| DIST. OF COLUM. | 15 | 0 | 0 | 9 | 6 | 0 | 0 | 0 |
| FLORIDA | 4,582 | 1,680 | 129 | 140 | 77 | 0 | 1,219 | 1,334 |
| GEORGIA | 1,538 | 534 | 192 | 3 | 94 | 14 | 324 | 373 |
| HAWAII | 589 | 181 | 0 | 0 | 0 | 17 | 283 | 106 |
| IDAHO | 351 | 161 | 8 | 1 | 7 | 2 | 108 | 62 |
| ILLINOIS | 2,373 | 598 | 985 | 0 | 178 | 55 | 209 | 366 |
| INDIANA | 983 | 313 | 148 | 1 | 47 | 3 | 293 | 174 |
| IOWA | 1,017 | 491 | 93 | 0 | 85 | 1 | 122 | 222 |
| KANSAS | 763 | 253 | 1 | 0 | 90 | 21 | 127 | 308 |
| KENTUCKY | 1,421 | 397 | 112 | 0 | 104 | 5 | 477 | 524 |
| LOUISIANA | 1,409 | 538 | 18 | 1 | 76 | 15 | 398 | 367 |
| MAINE | 585 | 197 | 2 | 0 | 17 | 6 | 226 | 133 |
| MARYLAND | 1,152 | 194 | 246 | 17 | 13 | 138 | 266 | 282 |
| MASSACHUSETTS | 3,163 | 1,375 | 98 | 23 | 20 | 18 | 885 | 740 |
| MICHIGAN | 3,081 | 1,322 | 263 | 39 | 73 | 99 | 598 | 692 |
| MINNESOTA | 1,160 | 578 | 109 | 15 | 28 | 17 | 157 | 253 |
| MISSISSIPPI | 804 | 358 | 65 | 3 | 55 | 0 | 134 | 186 |
| MISSOURI | 2,034 | 1,082 | 4 | 0 | 37 | 49 | 251 | 609 |
| MONTANA | 121 | 44 | 2 | 0 | 1 | 0 | 36 | 36 |
| NEBRASKA | 293 | 196 | 0 | 0 | 0 | 1 | 28 | 66 |
| NEVADA | 220 | 101 | 30 | 6 | 2 | 3 | 46 | 29 |
| NEW HAMPSHIRE | 986 | 317 | 4 | 2 | 9 | 4 | 311 | 315 |
| NEW JERSEY | 4,200 | 2,187 | 220 | 133 | 226 | 2 | 577 | 852 |
| NEW MEXICO | 250 | 149 | 1 | 0 | 0 | 0 | 47 | 52 |
| NEW YORK | 11,674 | 3,762 | 174 | 70 | 186 | 3,759 | 2,670 | 1,051 |
| NORTH CAROLINA | 1,775 | 448 | 124 | 40 | 87 | 8 | 589 | 564 |
| NORTH DAKOTA | 45 | 30 | 0 | 0 | 0 | 0 | 2 | 10 |
| OHIO | 3,433 | 1,045 | 522 | 119 | 135 | 21 | 806 | 781 |
| OKLAHOMA | 514 | 240 | 14 | 1 | 13 | 9 | 116 | 117 |
| OREGON | 885 | 189 | 34 | 4 | 71 | 17 | 363 | 206 |
| PENNSYLVANIA | 3,744 | 1,319 | 280 | 24 | 15 | 0 | 1,611 | 491 |
| RHODE ISLAND | 495 | 194 | 13 | 0 | 2 | 29 | 166 | 88 |
| SOUTH CAROLINA | 1,027 | 197 | 35 | 5 | 76 | 0 | 357 | 354 |
| SOUTH DAKOTA | 160 | 106 | 15 | 1 | 2 | 0 | 3 | 30 |
| TENNESSEE | 1,801 | 444 | 170 | 7 | 153 | 3 | 500 | 520 |
| TEXAS | 3,971 | 1,752 | 157 | 7 | 181 | 29 | 588 | 1,254 |
| UTAH | 562 | 346 | 75 | 0 | 11 | 0 | 67 | 61 |
| VERMONT | 234 | 95 | 23 | 0 | 7 | 3 | 76 | 31 |
| VIRGINIA | 1,624 | 657 | 44 | 56 | 18 | 2 | 501 | 345 |
| WASHINGTON | 2,498 | 874 | 6 | 17 | 115 | 62 | 685 | 724 |
| WEST VIRGINIA | 1,449 | 431 | 23 | 1 | 4 | 2 | 747 | 237 |
| WISCONSIN | 2,061 | 895 | 143 | 0 | 32 | 88 | 288 | 620 |
| WYOMING | 124 | 91 | 7 | 0 | 1 | 0 | 2 | 23 |
| AMERICAN SAMOA | 55 | 22 | 0 | 0 | 0 | 0 | 6 | 26 |
| GUAM | 38 | 22 | 0 | 0 | 0 | 0 | 7 | 7 |
| MARIANAS GROUP | 63 | 15 | 1 | 0 | 0 | 0 | 22 | 24 |
| PUERTO RICO | 1,113 | 369 | 5 | 0 | 18 | 11 | 390 | 316 |
| PAC. TR. TERR. | 106 | 59 | 0 | 0 | 0 | 0 | 24 | 20 |
| VIRGIN ISLANDS | 42 | 15 | 0 | 0 | 0 | 0 | 13 | 13 |
| U.S. TOTALS | 82,624 | 31,134 | 4,871 | 873 | 2,557 | 4,692 | 20,664 | 17,838 |

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 22

1982 NEEDS SURVEY

INDEPENDENT STATE ESTIMATES OF YEAR 2000 NEEDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU IV

| | TOTAL | I | IIA | IIB | III A | III B | IV A | IV B |
|---|---|---|---|---|---|---|---|---|
| ALABAMA | 1,176 | 361 | 82 | 24 | 88 | 4 | 355 | 260 |
| ALASKA | 396 | 188 | 0 | 0 | 2 | 0 | 98 | 115 |
| ARIZONA | 623 | 280 | 0 | 2 | 1 | 0 | 188 | 150 |
| ARKANSAS | 557 | 269 | 38 | 6 | 18 | 2 | 124 | 104 |
| CALIFORNIA | 5,168 | 2,435 | 72 | 71 | 200 | 156 | 1,487 | 745 |
| COLORADO | 509 | 312 | 15 | 0 | 5 | 1 | 28 | 145 |
| CONNECTICUT | 1,404 | 363 | 55 | 4 | 23 | 16 | 686 | 254 |
| DELAWARE | 144 | 42 | 20 | 0 | 0 | 2 | 41 | 37 |
| DIST. OF COLUM. | 15 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| FLORIDA | 4,582 | 1,680 | 129 | 140 | 77 | 0 | 1,219 | 1,334 |
| GEORGIA | 1,538 | 534 | 192 | 3 | 94 | 14 | 324 | 373 |
| HAWAII | 589 | 181 | 0 | 0 | 0 | 17 | 283 | 106 |
| IDAHO | 351 | 161 | 8 | 1 | 7 | 2 | 108 | 62 |
| ILLINOIS | 2,373 | 598 | 965 | 0 | 178 | 55 | 209 | 366 |
| INDIANA | 983 | 313 | 148 | 1 | 47 | 3 | 293 | 174 |
| IOWA | 1,017 | 491 | 93 | 0 | 85 | 1 | 122 | 222 |
| KANSAS | 763 | 253 | 1 | 0 | 50 | 21 | 127 | 308 |
| KENTUCKY | 1,621 | 397 | 112 | 0 | 184 | 5 | 477 | 524 |
| LOUISIANA | 1,489 | 538 | 18 | 1 | 76 | 15 | 390 | 367 |
| MAINE | 585 | 197 | 2 | 0 | 17 | 6 | 226 | 133 |
| MARYLAND | 1,152 | 194 | 246 | 17 | 13 | 130 | 266 | 282 |
| MASSACHUSETTS | 3,163 | 1,375 | 98 | 23 | 20 | 18 | 885 | 748 |
| MICHIGAN | 3,081 | 1,322 | 263 | 39 | 73 | 99 | 590 | 692 |
| MINNESOTA | 1,160 | 578 | 109 | 15 | 28 | 17 | 157 | 253 |
| MISSISSIPPI | 804 | 358 | 65 | 3 | 55 | 0 | 134 | 186 |
| MISSOURI | 2,034 | 1,082 | 4 | 0 | 37 | 49 | 251 | 609 |
| MONTANA | 121 | 44 | 2 | 0 | 1 | 0 | 36 | 36 |
| NEBRASKA | 293 | 196 | 0 | 0 | 0 | 1 | 28 | 66 |
| NEVADA | 220 | 101 | 30 | 6 | 2 | 3 | 46 | 29 |
| NEW HAMPSHIRE | 966 | 317 | 4 | 2 | 9 | 4 | 311 | 315 |
| NEW JERSEY | 4,208 | 2,187 | 220 | 133 | 226 | 2 | 577 | 852 |
| NEW MEXICO | 258 | 149 | 1 | 0 | 0 | 0 | 47 | 52 |
| NEW YORK | 11,674 | 3,762 | 174 | 70 | 186 | 3,750 | 2,670 | 1,051 |
| NORTH CAROLINA | 1,775 | 448 | 124 | 40 | 87 | 0 | 589 | 564 |
| NORTH DAKOTA | 45 | 30 | 0 | 0 | 0 | 0 | 2 | 10 |
| OHIO | 3,633 | 1,045 | 522 | 119 | 135 | 21 | 806 | 781 |
| OKLAHOMA | 514 | 240 | 14 | 1 | 13 | 9 | 116 | 117 |
| OREGON | 885 | 189 | 34 | 4 | 71 | 17 | 363 | 206 |
| PENNSYLVANIA | 3,744 | 1,319 | 280 | 24 | 15 | 8 | 1,611 | 491 |
| RHODE ISLAND | 495 | 194 | 13 | 0 | 2 | 29 | 166 | 88 |
| SOUTH CAROLINA | 1,027 | 197 | 35 | 5 | 76 | 0 | 357 | 354 |
| SOUTH DAKOTA | 160 | 106 | 15 | 1 | 2 | 0 | 3 | 30 |
| TENNESSEE | 1,881 | 444 | 170 | 7 | 153 | 3 | 580 | 520 |
| TEXAS | 3,982 | 1,758 | 158 | 7 | 181 | 29 | 588 | 1,258 |
| UTAH | 542 | 346 | 75 | 0 | 11 | 0 | 67 | 61 |
| VERMONT | 238 | 95 | 23 | 0 | 7 | 3 | 76 | 31 |
| VIRGINIA | 1,628 | 657 | 44 | 58 | 18 | 2 | 581 | 345 |
| WASHINGTON | 2,488 | 876 | 6 | 17 | 115 | 62 | 685 | 724 |
| WEST VIRGINIA | 1,449 | 431 | 23 | 1 | 4 | 2 | 747 | 237 |
| WISCONSIN | 2,861 | 895 | 143 | 0 | 32 | 88 | 288 | 620 |
| WYOMING | 126 | 91 | 7 | 0 | 1 | 0 | 2 | 23 |
| AMERICAN SAMOA | 55 | 22 | 0 | 0 | 0 | 0 | 6 | 26 |
| GUAM | 38 | 22 | 0 | 0 | 0 | 0 | 7 | 7 |
| MARIANAS GROUP | 63 | 15 | 1 | 0 | 0 | 0 | 22 | 24 |
| PUERTO RICO | 1,113 | 389 | 5 | 0 | 18 | 11 | 390 | 316 |
| PAC. TR. TERR. | 106 | 50 | 0 | 0 | 0 | 0 | 24 | 20 |
| VIRGIN ISLANDS | 42 | 15 | 0 | 0 | 0 | 0 | 13 | 13 |
| U.S. TOTALS | 82,773 | 31,141 | 4,872 | 873 | 2,695 | 4,692 | 20,664 | 17,833 |

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH IV

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 1,029,982 | 1,176,325 | +146,343 | 1.0920 | 1.4237 | +0.3316 |
| ALASKA | 540,280 | 396,286 | -143,994 | 0.5948 | 0.4796 | -0.1144 |
| ARIZONA | 691,674 | 623,055 | -68,619 | 0.7333 | 0.7540 | +0.0207 |
| ARKANSAS | 545,452 | 537,139 | -8,313 | 0.5995 | 0.6743 | +0.0747 |
| CALIFORNIA | 7,126,075 | 5,029,973 | -2,096,102 | 7.5554 | 6.0877 | -1.4677 |
| COLORADO | 1,056,188 | 589,435 | -546,753 | 1.1198 | 0.6165 | -0.5032 |
| CONNECTICUT | 1,228,871 | 1,404,510 | +175,639 | 1.3029 | 1.6998 | +0.3969 |
| DELAWARE | 303,370 | 144,249 | -159,121 | 0.3216 | 0.1745 | -0.1470 |
| DIST. OF COLUM. | 20,466 | 15,509 | -10,957 | 0.0288 | 0.0187 | -0.0092 |
| FLORIDA | 5,587,410 | 4,582,047 | -1,005,363 | 5.9240 | 5.5456 | -0.3784 |
| GEORGIA | 1,544,271 | 1,538,000 | -6,271 | 1.6373 | 1.8614 | +0.2241 |
| HAWAII | 932,708 | 589,561 | -343,147 | 0.9889 | 0.7135 | -0.2753 |
| IDAHO | 480,644 | 351,935 | -128,709 | 0.5096 | 0.4259 | -0.0836 |
| ILLINOIS | 2,618,881 | 2,373,667 | -245,214 | 2.7766 | 2.8728 | +0.0961 |
| INDIANA | 1,254,873 | 983,128 | -271,745 | 1.1304 | 1.1898 | -0.1406 |
| IOWA | 1,099,359 | 1,017,140 | -82,219 | 1.1656 | 1.2310 | +0.0654 |
| KANSAS | 949,403 | 763,936 | -185,467 | 1.0066 | 0.9245 | -0.0820 |
| KENTUCKY | 1,866,447 | 1,621,521 | -244,926 | 1.9789 | 1.9625 | -0.0163 |
| LOUISIANA | 1,310,665 | 1,409,505 | +98,840 | 1.3896 | 1.7059 | +0.3162 |
| MAINE | 650,242 | 585,096 | -65,148 | 0.6894 | 0.7081 | +0.0187 |
| MARYLAND | 3,363,939 | 1,152,288 | -2,211,659 | 3.5666 | 1.3946 | -2.1720 |
| MASSACHUSETTS | 3,006,013 | 3,163,587 | +157,574 | 3.1871 | 3.8288 | +0.6417 |
| MICHIGAN | 3,525,327 | 3,081,359 | -443,968 | 3.7377 | 3.7293 | -0.0083 |
| MINNESOTA | 1,485,233 | 1,140,341 | -344,892 | 1.4899 | 1.4063 | -0.0855 |
| MISSISSIPPI | 982,302 | 884,009 | -158,293 | 1.0202 | 0.9730 | -0.0471 |
| MISSOURI | 2,210,589 | 2,034,731 | -175,858 | 2.3437 | 2.4626 | +0.1188 |
| MONTANA | 126,643 | 121,237 | -5,426 | 0.1342 | 0.1467 | +0.0124 |
| NEBRASKA | 315,863 | 293,542 | -22,321 | 0.3348 | 0.3552 | +0.0203 |
| NEVADA | 275,970 | 220,216 | -55,754 | 0.2925 | 0.2665 | -0.0260 |
| NEW HAMPSHIRE | 995,790 | 966,026 | -29,764 | 1.0557 | 1.1691 | +0.1133 |
| NEW JERSEY | 4,144,482 | 4,200,363 | +35,881 | 4.4154 | 5.0836 | +0.6682 |
| NEW MEXICO | 221,479 | 250,593 | +29,114 | 0.2348 | 0.3032 | +0.0684 |
| NEW YORK | 12,346,059 | 11,674,194 | -649,865 | 13.1090 | 14.1292 | +1.0201 |
| NORTH CAROLINA | 1,978,849 | 1,775,284 | -202,765 | 2.0972 | 2.1486 | +0.0513 |
| NORTH DAKOTA | 42,289 | 45,027 | +17,262 | 0.0660 | 0.0544 | -0.0115 |
| OHIO | 3,804,629 | 3,433,281 | -371,428 | 4.0338 | 4.1551 | +0.1213 |
| OKLAHOMA | 711,371 | 514,867 | -196,504 | 0.7542 | 0.6231 | -0.1310 |
| OREGON | 1,116,042 | 885,869 | -230,213 | 1.1833 | 1.0721 | -0.1111 |
| PENNSYLVANIA | 3,860,607 | 3,744,310 | -116,297 | 4.0932 | 4.5317 | +0.4384 |
| RHODE ISLAND | 696,048 | 495,183 | -200,865 | 0.7380 | 0.5993 | -0.1386 |
| SOUTH CAROLINA | 993,190 | 1,027,403 | +34,213 | 1.0538 | 1.2434 | +0.1904 |
| SOUTH DAKOTA | 211,226 | 160,034 | -51,192 | 0.2239 | 0.1936 | -0.0302 |
| TENNESSEE | 1,958,771 | 1,881,163 | -47,608 | 1.9787 | 2.1799 | +0.2091 |
| TEXAS | 4,982,117 | 3,971,980 | -1,010,137 | 5.2823 | 4.8072 | -0.4750 |
| UTAH | 451,455 | 562,247 | +110,832 | 0.4786 | 0.6805 | +0.2018 |
| VERMONT | 249,014 | 238,758 | -20,256 | 0.2746 | 0.2889 | +0.0143 |
| VIRGINIA | 1,741,914 | 1,629,955 | -112,959 | 1.8468 | 1.9715 | +0.1246 |
| WASHINGTON | 2,497,144 | 2,484,924 | -108,241 | 2.7536 | 3.0123 | +0.2586 |
| WEST VIRGINIA | 1,207,736 | 1,449,124 | +241,388 | 1.2805 | 1.7538 | +0.4733 |
| WISCONSIN | 2,146,888 | 2,061,234 | -85,646 | 2.2762 | 2.4947 | +0.2184 |
| WYOMING | 154,086 | 126,867 | -27,139 | 0.1632 | 0.1535 | -0.0097 |
| AMERICAN SAMOA | 66,386 | 55,337 | -11,049 | 0.0703 | 0.0669 | -0.0034 |
| GUAM | 27,870 | 38,754 | +10,884 | 0.0295 | 0.0469 | +0.0173 |
| MARIANAS GROUP | 71,074 | 63,502 | -7,572 | 0.0753 | 0.0768 | +0.0014 |
| PUERTO RICO | 1,318,513 | 1,113,541 | -204,992 | 1.3979 | 1.3477 | -0.0502 |
| PAC. TR. TERR. | 125,320 | 106,114 | -19,206 | 0.1328 | 0.1284 | -0.0044 |
| VIRGIN ISLANDS | 53,970 | 42,101 | -11,869 | 0.0572 | 0.0509 | -0.0062 |
| U.S. TOTALS | 94,316,692 | 82,624,322 | -11,692,370 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 24

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 353,110 | 468,124 | +115,014 | 0.8982 | 1.2693 | +0.3711 |
| ALASKA | 362,583 | 180,010 | -182,573 | 0.9223 | 0.4881 | -0.4341 |
| ARIZONA | 318,205 | 283,823 | -34,382 | 0.8094 | 0.7695 | -0.0398 |
| ARKANSAS | 255,268 | 305,950 | +50,682 | 0.6493 | 0.8295 | +0.1802 |
| CALIFORNIA | 3,146,476 | 2,579,017 | -567,459 | 8.0049 | 6.9930 | -1.0618 |
| COLORADO | 488,450 | 327,506 | -160,944 | 1.2425 | 0.8880 | -0.3544 |
| CONNECTICUT | 421,206 | 423,546 | +2,340 | 1.0714 | 1.1484 | +0.0770 |
| DELAWARE | 156,144 | 62,752 | -93,392 | 0.3972 | 0.1701 | -0.2270 |
| DIST. OF COLUM. | 9,175 | 9,036 | -139 | 0.0233 | 0.0245 | +0.0012 |
| FLORIDA | 2,030,502 | 1,951,022 | -79,480 | 5.1652 | 5.2902 | +0.1250 |
| GEORGIA | 650,493 | 730,677 | +80,184 | 1.6547 | 1.9812 | +0.3265 |
| HAWAII | 295,427 | 181,540 | -113,887 | 0.7515 | 0.4922 | -0.2592 |
| IDAHO | 237,768 | 171,822 | -65,938 | 0.6048 | 0.4658 | -0.1389 |
| ILLINOIS | 1,815,119 | 1,563,949 | -251,170 | 4.6173 | 4.2406 | -0.3766 |
| INDIANA | 600,382 | 463,920 | -136,462 | 1.5272 | 1.2579 | -0.2692 |
| IOWA | 593,083 | 585,127 | -7,956 | 1.5087 | 1.5865 | +0.0778 |
| KANSAS | 389,971 | 254,874 | -135,097 | 0.9920 | 0.6910 | -0.3009 |
| KENTUCKY | 605,201 | 509,897 | -95,304 | 1.5395 | 1.3825 | -0.1569 |
| LOUISIANA | 501,895 | 558,788 | +56,893 | 1.2767 | 1.5151 | +0.2384 |
| MAINE | 211,640 | 200,362 | -11,278 | 0.5383 | 0.5432 | +0.0049 |
| MARYLAND | 822,664 | 458,529 | -364,135 | 2.0927 | 1.2433 | -0.8493 |
| MASSACHUSETTS | 1,173,170 | 1,498,214 | +325,044 | 2.9843 | 4.0624 | +1.0781 |
| MICHIGAN | 1,755,572 | 1,625,789 | -129,783 | 4.4658 | 4.4083 | -0.0574 |
| MINNESOTA | 707,853 | 704,042 | -3,811 | 1.8006 | 1.9090 | +0.1084 |
| MISSISSIPPI | 452,365 | 426,569 | -25,796 | 1.1507 | 1.1566 | +0.0059 |
| MISSOURI | 1,101,165 | 1,056,555 | -14,610 | 2.8011 | 2.9462 | +0.1451 |
| MONTANA | 67,585 | 46,812 | -20,773 | 0.1719 | 0.1269 | -0.0449 |
| NEBRASKA | 215,243 | 196,560 | -18,703 | 0.5475 | 0.5329 | -0.0145 |
| NEVADA | 145,032 | 138,222 | -46,810 | 0.4706 | 0.3747 | -0.0958 |
| NEW HAMPSHIRE | 313,190 | 324,987 | +11,797 | 0.7967 | 0.8812 | +0.0845 |
| NEW JERSEY | 2,215,008 | 2,541,287 | +326,279 | 5.6346 | 6.8907 | +1.2561 |
| NEW MEXICO | 130,226 | 150,839 | +20,613 | 0.3312 | 0.4090 | +0.0778 |
| NEW YORK | 3,981,596 | 4,007,200 | +25,604 | 10.1285 | 10.8656 | +0.7371 |
| NORTH CAROLINA | 818,834 | 612,967 | -197,867 | 2.0826 | 1.6620 | -0.4005 |
| NORTH DAKOTA | 42,941 | 30,933 | -12,008 | 0.1092 | 0.0838 | -0.0253 |
| OHIO | 1,775,317 | 1,687,367 | -87,950 | 4.5161 | 4.5753 | +0.0592 |
| OKLAHOMA | 322,731 | 256,768 | -65,963 | 0.8209 | 0.6962 | -0.1246 |
| OREGON | 345,875 | 227,465 | -107,210 | 0.8523 | 0.6178 | -0.2344 |
| PENNSYLVANIA | 1,698,049 | 1,625,405 | -72,644 | 4.3195 | 4.4073 | +0.0878 |
| RHODE ISLAND | 214,539 | 207,107 | -7,432 | 0.5457 | 0.5615 | +0.0158 |
| SOUTH CAROLINA | 299,453 | 239,048 | -60,405 | 0.7617 | 0.6481 | -0.1135 |
| SOUTH DAKOTA | 171,153 | 123,372 | -47,781 | 0.4353 | 0.3345 | -0.1007 |
| TENNESSEE | 722,137 | 622,920 | -99,217 | 1.8369 | 1.6890 | -0.1478 |
| TEXAS | 1,810,429 | 1,917,345 | +106,916 | 4.6054 | 5.1989 | +0.5935 |
| UTAH | 282,249 | 421,599 | +139,350 | 0.7181 | 1.1431 | +0.4250 |
| VERMONT | 123,540 | 119,954 | -3,586 | 0.3142 | 0.3252 | +0.0110 |
| VIRGINIA | 790,353 | 761,112 | -29,241 | 2.0105 | 2.0637 | +0.0532 |
| WASHINGTON | 1,035,217 | 899,970 | -135,247 | 2.6334 | 2.4402 | -0.1931 |
| WEST VIRGINIA | 426,185 | 456,821 | +30,636 | 1.0841 | 1.2386 | +0.1545 |
| WISCONSIN | 1,140,398 | 1,039,246 | -101,152 | 2.9009 | 2.8179 | -0.0829 |
| WYOMING | 105,854 | 99,083 | -6,773 | 0.2692 | 0.2686 | -0.0005 |
| AMERICAN SAMOA | 25,868 | 22,768 | -3,100 | 0.0657 | 0.0616 | -0.0040 |
| GUAM | 21,776 | 22,958 | +1,182 | 0.0553 | 0.0622 | +0.0069 |
| MARIANAS GROUP | 18,962 | 16,992 | -1,970 | 0.0482 | 0.0460 | -0.0021 |
| PUERTO RICO | 472,089 | 375,333 | -96,756 | 1.2009 | 1.0177 | -0.1831 |
| PAC. TR. TERR. | 41,415 | 40,378 | -1,037 | 0.1562 | 0.1637 | +0.0075 |
| VIRGIN ISLANDS | 21,413 | 15,001 | -6,412 | 0.0544 | 0.0406 | -0.0137 |
| U.S. TOTALS | 39,310,788 | 36,879,639 | -2,431,149 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 25

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CAT I, IIA, IIB, IIIA, AND IVA

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 696,755 | 816,685 | +119,930 | 1.0481 | 1.4260 | +0.3779 |
| ALASKA | 511,289 | 297,445 | -213,844 | 0.7691 | 0.5193 | -0.2497 |
| ARIZONA | 544,555 | 434,885 | -109,670 | 0.8191 | 0.7593 | -0.0597 |
| ARKANSAS | 418,272 | 428,897 | +10,625 | 0.6292 | 0.7489 | +0.1197 |
| CALIFORNIA | 5,444,541 | 3,366,544 | -2,077,997 | 8.2203 | 5.9135 | -2.3067 |
| COLORADO | 907,085 | 479,353 | -427,732 | 1.3645 | 0.8378 | -0.5274 |
| CONNECTICUT | 661,396 | 701,471 | +40,075 | 0.9949 | 1.2249 | +0.2300 |
| DELAWARE | 263,328 | 100,898 | -162,430 | 0.3961 | 0.1761 | -0.2199 |
| DIST. OF COLUM. | 26,466 | 15,509 | -10,957 | 0.0398 | 0.0270 | -0.0127 |
| FLORIDA | 4,092,294 | 3,362,908 | -729,386 | 6.1560 | 5.8723 | -0.2836 |
| GEORGIA | 1,252,516 | 1,198,509 | -54,007 | 1.8841 | 2.0928 | +0.2087 |
| HAWAII | 635,183 | 288,377 | -346,806 | 0.9555 | 0.5035 | -0.4519 |
| IDAHO | 362,845 | 241,466 | -121,379 | 0.5458 | 0.4216 | -0.1241 |
| ILLINOIS | 2,402,748 | 2,108,370 | -294,378 | 3.6144 | 3.6816 | +0.0672 |
| INDIANA | 885,545 | 686,339 | -199,216 | 1.3321 | 1.1984 | -0.1336 |
| IOWA | 970,063 | 892,954 | -77,109 | 1.4592 | 1.5592 | +0.1000 |
| KANSAS | 803,479 | 614,319 | -189,160 | 1.2086 | 1.0727 | -0.1358 |
| KENTUCKY | 1,272,201 | 1,138,706 | -133,495 | 1.9137 | 1.9884 | +0.0747 |
| LOUISIANA | 939,578 | 1,002,861 | +63,291 | 1.4134 | 1.7511 | +0.3377 |
| MAINE | 487,660 | 351,926 | -55,734 | 0.6132 | 0.6145 | +0.0013 |
| MARYLAND | 1,259,083 | 755,098 | -503,985 | 1.8940 | 1.3185 | -0.5754 |
| MASSACHUSETTS | 1,910,746 | 2,259,488 | +348,742 | 2.8743 | 3.9455 | +1.0712 |
| MICHIGAN | 2,603,359 | 2,391,432 | -211,927 | 3.9162 | 4.1759 | +0.2597 |
| MINNESOTA | 1,196,556 | 985,707 | -210,849 | 1.7999 | 1.7212 | -0.0786 |
| MISSISSIPPI | 843,117 | 668,356 | -174,761 | 1.2683 | 1.1670 | -0.1012 |
| MISSOURI | 1,914,974 | 1,733,367 | -181,607 | 2.8807 | 3.0268 | +0.1461 |
| MONTANA | 110,853 | 84,781 | -26,072 | 0.1667 | 0.1480 | -0.0186 |
| NEBRASKA | 291,515 | 263,630 | -27,885 | 0.4385 | 0.4603 | +0.0218 |
| NEVADA | 227,335 | 169,995 | -57,340 | 0.3419 | 0.2968 | -0.0450 |
| NEW HAMPSHIRE | 673,161 | 649,684 | -23,477 | 1.0126 | 1.1344 | +0.1218 |
| NEW JERSEY | 3,308,796 | 3,620,440 | +311,644 | 4.9774 | 6.3220 | +1.3446 |
| NEW MEXICO | 179,454 | 203,441 | +23,987 | 0.2699 | 0.3552 | +0.0853 |
| NEW YORK | 5,897,744 | 5,244,518 | -653,246 | 8.8720 | 9.1579 | +0.2859 |
| NORTH CAROLINA | 1,505,047 | 1,265,092 | -239,955 | 2.2641 | 2.2091 | -0.0549 |
| NORTH DAKOTA | 59,643 | 42,110 | -17,553 | 0.0897 | 0.0735 | -0.0161 |
| OHIO | 2,976,362 | 2,604,821 | -371,531 | 4.4773 | 4.5485 | +0.0712 |
| OKLAHOMA | 524,324 | 388,214 | -136,110 | 0.7887 | 0.6778 | -0.1108 |
| OREGON | 748,874 | 504,962 | -243,912 | 1.1265 | 0.8817 | -0.2447 |
| PENNSYLVANIA | 2,382,475 | 2,132,609 | -249,866 | 3.5830 | 3.7239 | +0.1409 |
| RHODE ISLAND | 346,319 | 298,600 | -47,719 | 0.5209 | 0.5214 | +0.0005 |
| SOUTH CAROLINA | 707,294 | 669,735 | -37,559 | 1.0639 | 1.1694 | +0.1055 |
| SOUTH DAKOTA | 205,871 | 156,072 | -49,799 | 0.3096 | 0.2725 | -0.0370 |
| TENNESSEE | 1,342,302 | 1,297,171 | -45,131 | 2.0044 | 2.2651 | +0.1707 |
| TEXAS | 4,105,236 | 3,354,003 | -751,233 | 6.1755 | 5.8567 | -0.3187 |
| UTAH | 389,687 | 494,676 | +105,989 | 0.5867 | 0.8638 | +0.2771 |
| VERMONT | 171,699 | 158,892 | -12,807 | 0.2582 | 0.2774 | +0.0192 |
| VIRGINIA | 1,344,645 | 1,125,168 | -219,477 | 2.0227 | 1.9647 | -0.0579 |
| WASHINGTON | 1,942,719 | 1,740,041 | -202,658 | 2.9224 | 3.0384 | +0.1160 |
| WEST VIRGINIA | 624,214 | 699,014 | +74,800 | 0.9390 | 1.2206 | +0.2816 |
| WISCONSIN | 1,835,518 | 1,691,885 | -143,625 | 2.7611 | 2.9543 | +0.1932 |
| WYOMING | 152,991 | 123,875 | -29,116 | 0.2301 | 0.2163 | -0.0137 |
| AMERICAN SAMOA | 54,886 | 48,820 | -6,066 | 0.0825 | 0.0852 | +0.0027 |
| GUAM | 27,870 | 31,194 | +3,324 | 0.0419 | 0.0544 | +0.0125 |
| MARIANAS GROUP | 48,086 | 41,471 | -6,615 | 0.0723 | 0.0724 | +0.0001 |
| PUERTO RICO | 875,414 | 710,792 | -164,622 | 1.3168 | 1.2411 | -0.0756 |
| PAC. TR. TERR. | 84,097 | 81,309 | -2,788 | 0.1265 | 0.1419 | +0.0154 |
| VIRGIN ISLANDS | 36,528 | 28,387 | -8,141 | 0.0549 | 0.0495 | -0.0053 |
| U.S. TOTALS | 66,475,649 | 57,267,292 | -9,208,357 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1982 DOLLARS
CATEGORY I

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 299,647 | 361,290 | +61,643 | 0.9112 | 1.1603 | +0.2491 |
| ALASKA | 362,583 | 180,010 | -182,573 | 1.1026 | 0.5781 | -0.5244 |
| ARIZONA | 318,138 | 280,306 | -37,832 | 0.9674 | 0.9002 | -0.0671 |
| ARKANSAS | 234,932 | 269,586 | +34,654 | 0.7144 | 0.8658 | +0.1514 |
| CALIFORNIA | 3,005,746 | 2,435,180 | -570,566 | 9.1407 | 7.8213 | -1.3193 |
| COLORADO | 419,420 | 312,317 | -107,103 | 1.2754 | 1.0030 | -0.2723 |
| CONNECTICUT | 359,473 | 363,798 | +4,325 | 1.0931 | 1.1684 | +0.0752 |
| DELAWARE | 109,361 | 42,041 | -67,300 | 0.3325 | 0.1350 | -0.1974 |
| DIST. OF COLUM. | 9,175 | 0 | -9,175 | 0.0278 | 0.0000 | -0.0278 |
| FLORIDA | 1,571,566 | 1,680,746 | +109,180 | 4.7792 | 5.3982 | +0.6189 |
| GEORGIA | 525,530 | 534,989 | +9,459 | 1.5981 | 1.7182 | +0.1200 |
| HAWAII | 287,474 | 181,540 | -105,934 | 0.8742 | 0.5830 | -0.2911 |
| IDAHO | 185,680 | 161,895 | -23,785 | 0.5646 | 0.5199 | -0.0446 |
| ILLINOIS | 708,686 | 598,129 | -110,557 | 2.1551 | 1.9210 | -0.2340 |
| INDIANA | 315,746 | 313,968 | -1,778 | 0.9601 | 1.0083 | +0.0481 |
| IOWA | 528,360 | 491,459 | -36,901 | 1.6067 | 1.5784 | -0.0283 |
| KANSAS | 383,508 | 253,827 | -129,681 | 1.1662 | 0.8152 | -0.3510 |
| KENTUCKY | 501,359 | 397,328 | -104,031 | 1.5246 | 1.2761 | -0.2485 |
| LOUISIANA | 492,358 | 538,407 | +46,049 | 1.4972 | 1.7292 | +0.2319 |
| MAINE | 208,624 | 197,511 | -11,113 | 0.6344 | 0.6343 | +0.0000 |
| MARYLAND | 381,506 | 194,541 | -186,965 | 1.1601 | 0.6248 | -0.5353 |
| MASSACHUSETTS | 1,100,233 | 1,375,551 | +275,318 | 3.3458 | 4.4180 | +1.0721 |
| MICHIGAN | 1,620,478 | 1,322,356 | -298,122 | 4.9279 | 4.2471 | -0.6808 |
| MINNESOTA | 371,528 | 578,391 | +206,863 | 1.1298 | 1.8576 | +0.7278 |
| MISSISSIPPI | 385,384 | 358,282 | -27,102 | 1.1719 | 1.1507 | -0.0212 |
| MISSOURI | 1,099,759 | 1,082,281 | -17,478 | 3.3444 | 3.4760 | +0.1316 |
| MONTANA | 53,634 | 44,001 | -9,633 | 0.1630 | 0.1413 | -0.0217 |
| NEBRASKA | 215,263 | 196,560 | -18,703 | 0.6546 | 0.6313 | -0.0233 |
| NEVADA | 108,523 | 101,478 | -7,045 | 0.3300 | 0.3259 | -0.0041 |
| NEW HAMPSHIRE | 297,943 | 317,777 | +19,834 | 0.9060 | 1.0206 | +0.1145 |
| NEW JERSEY | 1,988,973 | 2,187,502 | +198,529 | 6.0486 | 7.0258 | +0.9772 |
| NEW MEXICO | 129,221 | 149,136 | +19,915 | 0.3929 | 0.4789 | +0.0860 |
| NEW YORK | 3,849,631 | 3,742,790 | -106,841 | 11.7078 | 12.0853 | +0.3775 |
| NORTH CAROLINA | 602,248 | 448,361 | -153,887 | 1.8314 | 1.4400 | -0.3914 |
| NORTH DAKOTA | 42,941 | 30,933 | -12,008 | 0.1305 | 0.0993 | -0.0312 |
| OHIO | 1,041,459 | 1,045,564 | +3,705 | 3.1683 | 3.3581 | +0.1897 |
| OKLAHOMA | 285,868 | 240,158 | -45,710 | 0.8693 | 0.7713 | -0.0979 |
| OREGON | 206,890 | 189,165 | -17,725 | 0.6291 | 0.6075 | -0.0216 |
| PENNSYLVANIA | 1,432,239 | 1,319,767 | -112,472 | 4.3555 | 4.2388 | -0.1167 |
| RHODE ISLAND | 179,768 | 194,069 | +14,303 | 0.5466 | 0.6233 | +0.0766 |
| SOUTH CAROLINA | 273,947 | 197,965 | -76,022 | 0.8332 | 0.6358 | -0.1973 |
| SOUTH DAKOTA | 134,872 | 106,485 | -24,387 | 0.3979 | 0.3420 | -0.0559 |
| TENNESSEE | 554,160 | 444,407 | -109,753 | 1.6852 | 1.4273 | -0.2578 |
| TEXAS | 1,633,285 | 1,752,107 | +118,902 | 4.9667 | 5.6274 | +0.6607 |
| UTAH | 140,922 | 346,260 | +205,338 | 0.4589 | 1.1121 | +0.6531 |
| VERMONT | 109,176 | 95,836 | -13,340 | 0.3320 | 0.3077 | -0.0242 |
| VIRGINIA | 746,361 | 587,718 | -88,643 | 2.2697 | 2.1124 | -0.1572 |
| WASHINGTON | 898,526 | 878,261 | -20,265 | 2.7331 | 2.8143 | +0.0879 |
| WEST VIRGINIA | 413,573 | 431,800 | +18,227 | 1.2576 | 1.3868 | +0.1291 |
| WISCONSIN | 1,024,874 | 895,584 | -129,290 | 3.1167 | 2.8764 | -0.2402 |
| WYOMING | 93,823 | 91,721 | -2,102 | 0.2853 | 0.2945 | +0.0092 |
| AMERICAN SAMOA | 25,848 | 22,748 | -3,100 | 0.0785 | 0.0730 | -0.0055 |
| GUAM | 21,776 | 22,958 | +1,182 | 0.0662 | 0.0737 | +0.0075 |
| MARIANAS GROUP | 18,962 | 15,596 | -3,366 | 0.0576 | 0.0500 | -0.0075 |
| PUERTO RICO | 444,903 | 369,926 | -74,977 | 1.4137 | 1.1881 | -0.2256 |
| PAC. TR. TERR. | 61,415 | 59,627 | -1,788 | 0.1867 | 0.1915 | +0.0047 |
| VIRGIN ISLANDS | 21,413 | 15,001 | -6,412 | 0.0651 | 0.0481 | -0.0169 |
| U.S. TOTALS | 32,883,029 | 31,134,990 | -1,748,039 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
TO ACHIEVE MORE STRINGENT TREATMENT LEVELS
THOUSANDS OF 1982 DOLLARS
CATEGORIES IIA & IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 53,463 | 106,834 | +53,371 | 0.8317 | 1.8597 | +1.0280 |
| ALASKA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| ARIZONA | 67 | 3,517 | +3,450 | 0.0010 | 0.0612 | +0.0602 |
| ARKANSAS | 20,336 | 38,364 | +18,028 | 0.3163 | 0.6329 | +0.3166 |
| CALIFORNIA | 160,730 | 143,637 | -16,093 | 2.5005 | 2.5038 | +0.0033 |
| COLORADO | 69,030 | 15,189 | -53,841 | 1.0739 | 0.2643 | -0.8096 |
| CONNECTICUT | 61,733 | 59,748 | -1,985 | 0.9604 | 1.0400 | +0.0796 |
| DELAWARE | 46,803 | 20,711 | -26,092 | 0.7281 | 0.3605 | -0.3675 |
| DIST. OF COLUM. | 0 | 9,036 | +9,036 | 0.0000 | 0.1572 | +0.1572 |
| FLORIDA | 458,936 | 270,276 | -188,660 | 7.1399 | 4.7048 | -2.4350 |
| GEORGIA | 124,963 | 195,688 | +70,725 | 1.9441 | 3.4064 | +1.4623 |
| HAWAII | 7,953 | 0 | -7,953 | 0.1237 | 0.0000 | -0.1236 |
| IDAHO | 52,080 | 9,927 | -42,153 | 0.8102 | 0.1727 | -0.6373 |
| ILLINOIS | 1,106,433 | 965,820 | -140,613 | 17.2133 | 16.8125 | -0.4007 |
| INDIANA | 284,636 | 149,952 | -134,684 | 4.4282 | 2.6102 | -1.8179 |
| IOWA | 64,723 | 93,668 | +28,945 | 1.0069 | 1.6305 | +0.6236 |
| KANSAS | 6,463 | 1,047 | -5,416 | 0.1005 | 0.0182 | -0.0822 |
| KENTUCKY | 103,842 | 112,569 | +8,727 | 1.6155 | 1.9595 | +0.3440 |
| LOUISIANA | 9,537 | 20,381 | +10,844 | 0.1483 | 0.3547 | +0.2064 |
| MAINE | 3,816 | 2,851 | -165 | 0.0469 | 0.0496 | +0.0027 |
| MARYLAND | 441,158 | 263,988 | -177,170 | 6.8633 | 4.5953 | -2.2679 |
| MASSACHUSETTS | 72,937 | 122,663 | +49,726 | 1.1347 | 2.1352 | +1.0005 |
| MICHIGAN | 135,094 | 303,433 | +168,339 | 2.1017 | 5.2820 | +3.1803 |
| MINNESOTA | 336,325 | 125,651 | -210,674 | 5.2323 | 2.1872 | -3.0450 |
| MISSISSIPPI | 66,981 | 68,287 | +1,306 | 1.0420 | 1.1886 | +0.1467 |
| MISSOURI | 1,406 | 4,274 | +2,868 | 0.0218 | 0.0743 | +0.0525 |
| MONTANA | 13,951 | 2,811 | -11,140 | 0.2170 | 0.0489 | -0.1680 |
| NEBRASKA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| NEVADA | 76,509 | 36,744 | -39,765 | 1.1902 | 0.6396 | -0.5505 |
| NEW HAMPSHIRE | 15,247 | 7,210 | -8,037 | 0.2372 | 0.1254 | -0.1117 |
| NEW JERSEY | 226,035 | 353,785 | +127,750 | 3.5165 | 6.1585 | +2.6420 |
| NEW MEXICO | 1,005 | 1,703 | +698 | 0.0156 | 0.0296 | +0.0140 |
| NEW YORK | 111,965 | 244,410 | +132,445 | 1.7418 | 4.2545 | +2.5127 |
| NORTH CAROLINA | 208,586 | 164,606 | -43,980 | 3.2450 | 2.8653 | -0.3796 |
| NORTH DAKOTA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| OHIO | 733,458 | 641,803 | -91,655 | 11.4107 | 11.1721 | -0.2385 |
| OKLAHOMA | 36,863 | 16,610 | -20,253 | 0.5734 | 0.2891 | -0.2842 |
| OREGON | 128,185 | 38,700 | -89,485 | 1.9942 | 0.6736 | -1.3205 |
| PENNSYLVANIA | 265,410 | 305,638 | +39,828 | 4.1353 | 5.3203 | +1.1850 |
| RHODE ISLAND | 34,773 | 13,038 | -21,735 | 0.5409 | 0.2269 | -0.3139 |
| SOUTH CAROLINA | 25,466 | 41,083 | +15,617 | 0.3961 | 0.7151 | +0.3190 |
| SOUTH DAKOTA | 40,281 | 16,867 | -23,394 | 0.6266 | 0.2939 | -0.3326 |
| TENNESSEE | 167,977 | 174,513 | +10,536 | 2.6133 | 3.1074 | +0.4941 |
| TEXAS | 177,224 | 165,238 | -11,986 | 2.7571 | 2.8763 | +0.1192 |
| UTAH | 131,377 | 79,339 | -56,038 | 2.0439 | 1.3114 | -0.7324 |
| VERMONT | 14,384 | 24,118 | +9,754 | 0.2234 | 0.4198 | +0.1964 |
| VIRGINIA | 43,992 | 109,394 | +59,402 | 0.6844 | 1.7998 | +1.1154 |
| WASHINGTON | 134,691 | 23,709 | -114,982 | 2.1576 | 0.4127 | -1.7448 |
| WEST VIRGINIA | 12,612 | 25,021 | +12,409 | 0.1962 | 0.4355 | +0.2393 |
| WISCONSIN | 115,524 | 143,662 | +28,138 | 1.7972 | 2.5007 | +0.7035 |
| WYOMING | 12,033 | 7,362 | -4,671 | 0.1872 | 0.1281 | -0.0590 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| MARIANAS GROUP | 0 | 1,396 | +1,396 | 0.0000 | 0.0242 | +0.0242 |
| PUERTO RICO | 7,186 | 5,407 | -1,779 | 0.1117 | 0.0941 | -0.0175 |
| PAC. TR. TERR. | 0 | 751 | +751 | 0.0000 | 0.0130 | +0.0130 |
| VIRGIN ISLANDS | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| U.S. TOTALS | 6,427,759 | 5,744,649 | -683,110 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 89,477 | 88,114 | -1,363 | 3.1421 | 3.4454 | +0.3033 |
| ALASKA | 28,112 | 2,218 | -25,894 | 0.9872 | 0.0867 | -0.9004 |
| ARIZONA | 934 | 1,050 | +116 | 0.0327 | 0.0410 | +0.0083 |
| ARKANSAS | 31,623 | 18,539 | -13,084 | 1.1105 | 0.7249 | -0.3855 |
| CALIFORNIA | 59,083 | 61,869 | +2,786 | 2.0748 | 2.4192 | +0.3444 |
| COLORADO | 11,822 | 5,919 | -5,903 | 0.4151 | 0.2314 | -0.1836 |
| CONNECTICUT | 13,302 | 23,580 | +10,278 | 0.4671 | 0.9220 | +0.4549 |
| DELAWARE | 4,083 | 941 | -3,142 | 0.1433 | 0.0367 | -0.1065 |
| DIST. OF COLUM. | 17,291 | 6,473 | -10,818 | 0.6072 | 0.2531 | -0.3540 |
| FLORIDA | 102,001 | 77,471 | -24,530 | 3.5819 | 3.0292 | -0.5525 |
| GEORGIA | 100,721 | 94,145 | -6,576 | 3.5378 | 3.6812 | +0.1442 |
| HAWAII | 17 | 0 | -17 | 0.0005 | 0.0000 | -0.0004 |
| IDAHO | 19,010 | 7,044 | -11,966 | 0.6675 | 0.2754 | -0.3920 |
| ILLINOIS | 207,428 | 178,019 | -29,409 | 7.2842 | 6.9609 | -0.3232 |
| INDIANA | 47,034 | 47,577 | +543 | 1.6516 | 1.8603 | +0.2087 |
| IOWA | 112,056 | 85,729 | -26,327 | 3.9350 | 3.3522 | -0.5827 |
| KANSAS | 63,428 | 50,717 | -12,711 | 2.2274 | 1.9831 | -0.2442 |
| KENTUCKY | 99,352 | 104,413 | +5,061 | 3.4889 | 4.0827 | +0.5939 |
| LOUISIANA | 59,365 | 76,993 | +17,628 | 2.0847 | 3.0106 | +0.9259 |
| MAINE | 14,653 | 17,973 | +3,320 | 0.5145 | 0.7027 | +0.1882 |
| MARYLAND | 12,580 | 13,649 | +1,149 | 0.4389 | 0.5336 | +0.0947 |
| MASSACHUSETTS | 14,356 | 20,528 | +6,172 | 0.5041 | 0.8026 | +0.2985 |
| MICHIGAN | 69,081 | 73,344 | +4,263 | 2.4259 | 2.8679 | +0.4420 |
| MINNESOTA | 42,289 | 28,488 | -13,801 | 1.4850 | 1.1139 | -0.3710 |
| MISSISSIPPI | 126,448 | 55,271 | -71,177 | 4.4404 | 2.1612 | -2.2791 |
| MISSOURI | 47,596 | 37,624 | -9,972 | 1.6714 | 1.4711 | -0.2002 |
| MONTANA | 1,784 | 1,459 | -325 | 0.0626 | 0.0570 | -0.0055 |
| NEBRASKA | 1,087 | 637 | -450 | 0.0381 | 0.0248 | -0.0131 |
| NEVADA | 2,698 | 2,560 | -138 | 0.0947 | 0.1000 | +0.0054 |
| NEW HAMPSHIRE | 9,595 | 9,533 | -62 | 0.3369 | 0.3727 | +0.0358 |
| NEW JERSEY | 121,494 | 226,954 | +105,460 | 4.2665 | 8.8744 | +4.6079 |
| NEW MEXICO | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| NEW YORK | 110,688 | 186,072 | +75,384 | 3.8870 | 7.2758 | +3.3888 |
| NORTH CAROLINA | 97,715 | 87,345 | -10,370 | 3.4314 | 3.4153 | -0.0159 |
| NORTH DAKOTA | 572 | 441 | -131 | 0.0200 | 0.0172 | -0.0027 |
| OHIO | 255,301 | 135,785 | -119,516 | 8.9654 | 5.3095 | -3.6558 |
| OKLAHOMA | 44,839 | 13,904 | -30,935 | 1.5746 | 0.5436 | -1.0309 |
| OREGON | 49,645 | 71,071 | +21,426 | 1.7433 | 2.7790 | +1.0357 |
| PENNSYLVANIA | 17,850 | 15,837 | -2,013 | 0.6268 | 0.6192 | -0.0075 |
| RHODE ISLAND | 2,754 | 2,771 | +17 | 0.0967 | 0.1083 | +0.0116 |
| SOUTH CAROLINA | 69,370 | 76,292 | +6,922 | 2.4360 | 2.9831 | +0.5471 |
| SOUTH DAKOTA | 4,947 | 2,606 | -2,341 | 0.1737 | 0.1018 | -0.0718 |
| TENNESSEE | 153,577 | 153,873 | +296 | 5.3931 | 6.0168 | +0.6237 |
| TEXAS | 199,888 | 181,791 | -18,097 | 7.0194 | 7.1084 | +0.0890 |
| UTAH | 36,456 | 11,450 | -25,106 | 1.2837 | 0.4477 | -0.8359 |
| VERMONT | 2,388 | 7,640 | +5,252 | 0.8838 | 0.2987 | +0.2149 |
| VIRGINIA | 18,334 | 18,199 | -135 | 0.6438 | 0.7116 | +0.0678 |
| WASHINGTON | 110,975 | 115,894 | +4,919 | 3.8971 | 4.5317 | +0.6346 |
| WEST VIRGINIA | 2,075 | 4,423 | +2,348 | 0.0728 | 0.1729 | +0.1001 |
| WISCONSIN | 112,543 | 32,048 | -80,495 | 3.9521 | 1.2531 | -2.6989 |
| WYOMING | 6,936 | 1,426 | -5,510 | 0.2435 | 0.0557 | -0.1877 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 825 | 922 | +97 | 0.0289 | 0.0360 | +0.0071 |
| MARIANAS GROUP | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| PUERTO RICO | 19,969 | 18,613 | -1,356 | 0.7012 | 0.7278 | +0.0266 |
| PAC. TR. TERR. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VIRGIN ISLANDS | 158 | 148 | -10 | 0.0055 | 0.0057 | +0.0002 |
| U.S. TOTALS | 2,847,625 | 2,557,382 | -290,243 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 29

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1982 DOLLARS
CATEGORY III B

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 4,084 | 4,614 | +530 | 0.0600 | 0.0983 | +0.0383 |
| ALASKA | 109 | 109 | +0 | 0.0016 | 0.0023 | +0.0007 |
| ARIZONA | 364 | 39 | -325 | 0.0053 | 0.0008 | -0.0044 |
| ARKANSAS | 3,002 | 2,236 | -766 | 0.0441 | 0.0476 | +0.0035 |
| CALIFORNIA | 193,914 | 156,111 | -37,803 | 2.8495 | 3.3269 | +0.4774 |
| COLORADO | 124,566 | 1,262 | -123,304 | 1.8304 | 0.0268 | -1.8035 |
| CONNECTICUT | 16,324 | 16,634 | +310 | 0.2398 | 0.3544 | +0.1146 |
| DELAWARE | 1,549 | 2,328 | +779 | 0.0227 | 0.0496 | +0.0269 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 10 | 0 | -10 | 0.0001 | 0.0000 | +0.0000 |
| GEORGIA | 9,287 | 14,583 | +5,296 | 0.1364 | 0.3107 | +0.1743 |
| HAWAII | 0 | 17,213 | +17,213 | 0.0000 | 0.3668 | +0.3668 |
| IDAHO | 436 | 2,224 | +1,788 | 0.0064 | 0.0473 | +0.0409 |
| ILLINOIS | 11,205 | 55,345 | +44,140 | 0.1646 | 1.1794 | +1.0148 |
| INDIANA | 22,660 | 3,027 | -19,633 | 0.3329 | 0.0645 | -0.2683 |
| IOWA | 1,320 | 1,323 | +3 | 0.0193 | 0.0281 | +0.0088 |
| KANSAS | 22,532 | 21,670 | -862 | 0.3311 | 0.4618 | +0.1307 |
| KENTUCKY | 9,428 | 5,255 | -4,173 | 0.1385 | 0.1119 | -0.0265 |
| LOUISIANA | 12,905 | 15,692 | +2,787 | 0.1896 | 0.3344 | +0.1448 |
| MAINE | 7,565 | 6,351 | -1,214 | 0.1111 | 0.1353 | +0.0242 |
| MARYLAND | 1,846,323 | 130,750 | -1,715,573 | 27.1314 | 2.7864 | -24.3448 |
| MASSACHUSETTS | 123,172 | 18,384 | -104,788 | 1.8099 | 0.3917 | -1.4181 |
| MICHIGAN | 87,623 | 99,451 | +11,828 | 1.2876 | 2.1194 | +0.8318 |
| MINNESOTA | 32,614 | 17,081 | -15,533 | 0.4792 | 0.3640 | -0.1151 |
| MISSISSIPPI | 0 | 947 | +947 | 0.0000 | 0.0201 | +0.0201 |
| MISSOURI | 36,558 | 49,478 | +12,920 | 0.5372 | 1.0544 | +0.5172 |
| MONTANA | 598 | 124 | -474 | 0.0087 | 0.0026 | -0.0060 |
| NEBRASKA | 1,315 | 1,316 | +1 | 0.0193 | 0.0280 | +0.0087 |
| NEVADA | 3,138 | 3,892 | +754 | 0.0461 | 0.0829 | +0.0368 |
| NEW HAMPSHIRE | 5,804 | 4,773 | -1,031 | 0.0852 | 0.1017 | +0.0165 |
| NEW JERSEY | 1,903 | 2,277 | +374 | 0.0279 | 0.0485 | +0.0206 |
| NEW MEXICO | 312 | 88 | -223 | 0.0045 | 0.0018 | -0.0026 |
| NEW YORK | 3,829,310 | 3,759,523 | -69,787 | 56.2711 | 80.1218 | +23.8507 |
| NORTH CAROLINA | 0 | 314 | +314 | 0.0000 | 0.0066 | +0.0066 |
| NORTH DAKOTA | 0 | 88 | +88 | 0.0000 | 0.0018 | +0.0018 |
| OHIO | 13,258 | 21,394 | +8,136 | 0.1948 | 0.4559 | +0.2611 |
| OKLAHOMA | 28,485 | 9,928 | -18,557 | 0.4185 | 0.2115 | -0.2069 |
| OREGON | 57,342 | 17,604 | -39,758 | 0.8429 | 0.3751 | -0.4677 |
| PENNSYLVANIA | 909 | 545 | -364 | 0.0133 | 0.0116 | -0.0016 |
| RHODE ISLAND | 29,934 | 29,963 | +29 | 0.4398 | 0.6385 | +0.1987 |
| SOUTH CAROLINA | 624 | 0 | -624 | 0.0091 | 0.0000 | -0.0090 |
| SOUTH DAKOTA | 1,888 | 721 | -1,167 | 0.0277 | 0.0153 | -0.0123 |
| TENNESSEE | 417 | 3,776 | +3,359 | 0.0061 | 0.0804 | +0.0743 |
| TEXAS | 120,029 | 29,520 | -90,509 | 1.7638 | 0.6291 | -1.1346 |
| UTAH | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VERMONT | 6,824 | 3,239 | -3,585 | 0.1002 | 0.0690 | -0.0311 |
| VIRGINIA | 16,031 | 2,185 | -13,846 | 0.2355 | 0.0465 | -0.1889 |
| WASHINGTON | 85,281 | 62,963 | -22,318 | 1.2531 | 1.3418 | +0.0887 |
| WEST VIRGINIA | 3,251 | 2,719 | -532 | 0.0477 | 0.0579 | +0.0102 |
| WISCONSIN | 18,094 | 80,914 | +62,820 | 0.2658 | 1.7244 | +1.4586 |
| WYOMING | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 0 | 370 | +370 | 0.0000 | 0.0078 | +0.0078 |
| MARIANAS GROUP | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| PUERTO RICO | 12,782 | 11,914 | -868 | 0.1878 | 0.2538 | +0.0660 |
| PAC. TR. TERR. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VIRGIN ISLANDS | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| U.S. TOTALS | 6,805,099 | 4,692,254 | -2,112,841 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV A

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 329,143 | 355,026 | +25,883 | 1.5646 | 1.7180 | +0.1533 |
| ALASKA | 48,882 | 98,732 | +49,850 | 0.2323 | 0.4777 | +0.2453 |
| ARIZONA | 146,755 | 188,131 | +41,376 | 0.6976 | 0.9103 | +0.2127 |
| ARKANSAS | 144,178 | 126,006 | -18,172 | 0.6853 | 0.6097 | -0.0756 |
| CALIFORNIA | 1,467,620 | 1,687,318 | +19,698 | 6.9767 | 7.1973 | +0.2206 |
| COLORADO | 24,537 | 28,820 | +4,283 | 0.1166 | 0.1394 | +0.0228 |
| CONNECTICUT | 551,151 | 686,405 | +135,254 | 2.6200 | 3.3216 | +0.7015 |
| DELAWARE | 38,493 | 41,023 | +2,530 | 0.1829 | 0.1985 | +0.0155 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 1,495,186 | 1,219,139 | -275,967 | 7.1073 | 5.8995 | -1.2077 |
| GEORGIA | 282,468 | 324,908 | +42,440 | 1.3427 | 1.5722 | +0.2294 |
| HAWAII | 297,525 | 283,971 | -13,554 | 1.4143 | 1.3741 | -0.0401 |
| IDAHO | 117,363 | 108,245 | -9,118 | 0.5579 | 0.5238 | -0.0340 |
| ILLINOIS | 204,936 | 209,952 | +5,016 | 0.9742 | 1.0159 | +0.0417 |
| INDIANA | 346,658 | 293,762 | -52,896 | 1.6479 | 1.4215 | -0.2263 |
| IOWA | 127,976 | 122,863 | -5,113 | 0.6083 | 0.5945 | -0.0138 |
| KANSAS | 123,392 | 127,947 | +4,555 | 0.5865 | 0.6191 | +0.0325 |
| KENTUCKY | 584,818 | 477,560 | -107,258 | 2.7800 | 2.3109 | -0.4691 |
| LOUISIANA | 358,190 | 390,952 | +32,762 | 1.7027 | 1.8918 | +0.1891 |
| MAINE | 235,017 | 226,817 | -8,200 | 1.1172 | 1.0975 | -0.0196 |
| MARYLAND | 258,533 | 266,432 | +7,899 | 1.2289 | 1.2892 | +0.0603 |
| MASSACHUSETTS | 972,045 | 885,715 | -86,330 | 4.6211 | 4.2861 | -0.3349 |
| MICHIGAN | 834,345 | 590,476 | -243,869 | 3.9662 | 2.8573 | -1.1088 |
| MINNESOTA | 176,063 | 157,553 | -18,510 | 0.8369 | 0.7624 | -0.0745 |
| MISSISSIPPI | 119,185 | 134,706 | +15,521 | 0.5665 | 0.6518 | +0.0852 |
| MISSOURI | 259,057 | 251,886 | -7,171 | 1.2314 | 1.2189 | -0.0125 |
| MONTANA | 15,212 | 36,332 | +21,120 | 0.0723 | 0.1758 | +0.1034 |
| NEBRASKA | 23,033 | 28,596 | +5,563 | 0.1094 | 0.1383 | +0.0288 |
| NEVADA | 45,497 | 46,329 | +832 | 0.2162 | 0.2241 | +0.0079 |
| NEW HAMPSHIRE | 316,825 | 311,569 | -5,256 | 1.5061 | 1.5077 | +0.0016 |
| NEW JERSEY | 853,783 | 577,646 | -276,137 | 4.0586 | 2.7953 | -1.2633 |
| NEW MEXICO | 41,713 | 47,063 | +5,350 | 0.1982 | 0.2277 | +0.0294 |
| NEW YORK | 2,638,985 | 2,670,153 | +33,168 | 12.5356 | 12.9212 | +0.3856 |
| NORTH CAROLINA | 472,962 | 509,878 | +36,916 | 2.2483 | 2.4673 | +0.2190 |
| NORTH DAKOTA | 2,626 | 2,829 | +203 | 0.0124 | 0.0136 | +0.0011 |
| OHIO | 815,019 | 806,986 | -8,033 | 3.8744 | 3.9051 | +0.0307 |
| OKLAHOMA | 158,562 | 116,725 | -41,837 | 0.7537 | 0.5648 | -0.1889 |
| OREGON | 309,866 | 363,303 | +53,457 | 1.4729 | 1.7580 | +0.2851 |
| PENNSYLVANIA | 1,477,223 | 1,611,156 | +133,933 | 7.0223 | 7.7966 | +0.7742 |
| RHODE ISLAND | 319,815 | 146,620 | -153,195 | 1.5203 | 0.8062 | -0.7140 |
| SOUTH CAROLINA | 285,272 | 357,668 | +72,396 | 1.3561 | 1.7308 | +0.3747 |
| SOUTH DAKOTA | 3,467 | 3,241 | -226 | 0.0164 | 0.0156 | -0.0008 |
| TENNESSEE | 466,052 | 500,216 | +34,164 | 2.2154 | 2.4206 | +0.2051 |
| TEXAS | 756,852 | 588,467 | -168,385 | 3.5978 | 2.8476 | -0.7502 |
| UTAH | 42,768 | 47,611 | +4,843 | 0.2983 | 0.3271 | +0.0287 |
| VERMONT | 80,441 | 76,627 | -3,814 | 0.3826 | 0.3707 | -0.0118 |
| VIRGINIA | 381,234 | 501,602 | +120,364 | 1.8123 | 2.4273 | +0.6150 |
| WASHINGTON | 569,165 | 685,900 | +116,735 | 2.7056 | 3.3191 | +0.6135 |
| WEST VIRGINIA | 580,271 | 747,391 | +167,120 | 2.7584 | 3.6167 | +0.8582 |
| WISCONSIN | 293,276 | 288,435 | -4,841 | 1.3941 | 1.3957 | +0.0016 |
| WYOMING | 1,015 | 2,992 | +1,977 | 0.0048 | 0.0144 | +0.0096 |
| AMERICAN SAMOA | 11,500 | 6,517 | -4,983 | 0.0546 | 0.0315 | -0.0231 |
| GUAM | 0 | 7,190 | +7,190 | 0.0000 | 0.0347 | +0.0347 |
| MARIANAS GROUP | 22,988 | 22,031 | -957 | 0.1092 | 0.1066 | -0.0026 |
| PUERTO RICO | 430,337 | 390,835 | -39,502 | 2.0457 | 1.8913 | -0.1544 |
| PAC. TR. TERR. | 41,223 | 24,805 | -16,418 | 0.1959 | 0.1200 | -0.0759 |
| VIRGIN ISLANDS | 17,442 | 13,714 | -3,728 | 0.0829 | 0.0663 | -0.0165 |
| U.S. TOTALS | 21,035,944 | 20,664,772 | -371,172 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE | 1980 EPA ESTIMATE | 1982 EPA ASSESSMENT | CHANGE |
| ALABAMA | 254,168 | 260,447 | +6,279 | 1.0452 | 1.4606 | +0.4154 |
| ALASKA | 120,594 | 115,217 | -5,377 | 0.4959 | 0.6461 | +0.1502 |
| ARIZONA | 225,416 | 150,012 | -75,404 | 0.9269 | 0.8413 | -0.0855 |
| ARKANSAS | 131,381 | 104,408 | -26,973 | 0.5402 | 0.5855 | +0.0453 |
| CALIFORNIA | 2,238,982 | 745,658 | -1,493,324 | 9.2073 | 4.1819 | -5.0253 |
| COLORADO | 406,813 | 145,928 | -260,885 | 1.6729 | 0.8184 | -0.8544 |
| CONNECTICUT | 226,848 | 254,345 | +27,457 | 0.9330 | 1.4264 | +0.4934 |
| DELAWARE | 103,101 | 37,205 | -65,896 | 0.4239 | 0.2086 | -0.2152 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 1,959,791 | 1,334,415 | -625,376 | 8.0592 | 7.4839 | -0.5752 |
| GEORGIA | 501,302 | 373,687 | -127,615 | 2.0615 | 2.0957 | +0.0342 |
| HAWAII | 339,739 | 106,837 | -232,902 | 1.3971 | 0.5991 | -0.7979 |
| IDAHO | 106,075 | 62,600 | -43,475 | 0.4362 | 0.3510 | -0.0851 |
| ILLINOIS | 380,193 | 366,402 | -13,791 | 1.5634 | 2.0549 | +0.4915 |
| INDIANA | 238,139 | 174,842 | -63,297 | 0.9793 | 0.9805 | +0.0012 |
| IOWA | 264,924 | 222,098 | -42,826 | 1.0894 | 1.2456 | +0.1562 |
| KANSAS | 350,080 | 308,728 | -41,352 | 1.4396 | 1.7314 | +0.2918 |
| KENTUCKY | 567,648 | 524,396 | -43,252 | 2.3343 | 2.9410 | +0.6067 |
| LOUISIANA | 378,310 | 367,080 | -11,230 | 1.5557 | 2.0587 | +0.5030 |
| MAINE | 181,367 | 133,591 | -47,776 | 0.7458 | 0.7492 | +0.0034 |
| MARYLAND | 423,919 | 282,920 | -140,999 | 1.7432 | 1.5867 | -0.1564 |
| MASSACHUSETTS | 723,220 | 740,746 | +17,526 | 2.9741 | 4.1544 | +1.1803 |
| MICHIGAN | 778,706 | 692,299 | -86,407 | 3.2022 | 3.8827 | +0.6805 |
| MINNESOTA | 446,414 | 253,177 | -193,237 | 1.8357 | 1.4199 | -0.4157 |
| MISSISSIPPI | 244,304 | 186,516 | -77,788 | 1.0048 | 1.0460 | -0.0407 |
| MISSOURI | 766,213 | 609,188 | -157,025 | 3.1509 | 3.4165 | +0.2656 |
| MONTANA | 41,444 | 36,510 | -4,934 | 0.1705 | 0.2047 | +0.0342 |
| NEBRASKA | 75,165 | 66,433 | -8,732 | 0.3091 | 0.3725 | +0.0634 |
| NEVADA | 39,605 | 29,213 | -10,392 | 0.1628 | 0.1638 | +0.0010 |
| NEW HAMPSHIRE | 350,376 | 315,164 | -35,212 | 1.4408 | 1.7675 | +0.3267 |
| NEW JERSEY | 972,294 | 852,199 | -120,095 | 3.9983 | 4.7794 | +0.7811 |
| NEW MEXICO | 49,228 | 52,602 | +3,374 | 0.2024 | 0.2950 | +0.0926 |
| NEW YORK | 1,805,440 | 1,051,246 | -754,234 | 7.4246 | 5.8958 | -1.5287 |
| NORTH CAROLINA | 596,538 | 564,780 | -31,758 | 2.4531 | 3.1675 | +0.7144 |
| NORTH DAKOTA | 16,150 | 10,736 | -5,414 | 0.0664 | 0.0602 | -0.0061 |
| OHIO | 945,734 | 781,669 | -164,065 | 3.8891 | 4.3839 | +0.4948 |
| OKLAHOMA | 156,754 | 117,542 | -39,212 | 0.6446 | 0.6592 | +0.0146 |
| OREGON | 344,154 | 206,026 | -138,128 | 1.4975 | 1.1554 | -0.3420 |
| PENNSYLVANIA | 666,576 | 491,367 | -175,209 | 2.7411 | 2.7557 | +0.0146 |
| RHODE ISLAND | 129,026 | 88,722 | -40,304 | 0.5305 | 0.4975 | -0.0329 |
| SOUTH CAROLINA | 338,471 | 354,395 | +15,924 | 1.3918 | 1.9875 | +0.5957 |
| SOUTH DAKOTA | 29,771 | 30,094 | +323 | 0.1224 | 0.1687 | +0.0463 |
| TENNESSEE | 516,588 | 520,378 | +3,790 | 2.1243 | 2.9184 | +0.7942 |
| TEXAS | 2,094,919 | 1,254,867 | -840,052 | 8.6149 | 7.0378 | -1.5770 |
| UTAH | 69,832 | 61,627 | -8,205 | 0.2871 | 0.3456 | +0.0585 |
| VERMONT | 45,771 | 31,298 | -14,473 | 0.1882 | 0.1755 | -0.0126 |
| VIRGINIA | 535,958 | 345,857 | -190,101 | 2.2040 | 1.9397 | -0.2642 |
| WASHINGTON | 798,527 | 724,197 | -72,330 | 3.2755 | 4.0616 | +0.7861 |
| WEST VIRGINIA | 195,954 | 237,770 | +41,816 | 0.8058 | 1.3335 | +0.5277 |
| WISCONSIN | 582,569 | 620,591 | +38,022 | 2.3957 | 3.4805 | +1.0848 |
| WYOMING | 40,199 | 23,366 | -16,833 | 0.1653 | 0.1310 | -0.0342 |
| AMERICAN SAMOA | 29,038 | 26,072 | -2,966 | 0.1194 | 0.1462 | +0.0268 |
| GUAM | 5,269 | 7,314 | +2,045 | 0.0216 | 0.0410 | +0.0194 |
| MARIANAS GROUP | 29,124 | 24,479 | -4,645 | 0.1197 | 0.1372 | +0.0175 |
| PUERTO RICO | 383,346 | 316,846 | -66,510 | 1.5764 | 1.7770 | +0.2006 |
| PAC. TR. TERR. | 22,682 | 20,931 | -1,751 | 0.0932 | 0.1173 | +0.0241 |
| VIRGIN ISLANDS | 14,957 | 13,238 | -1,719 | 0.0615 | 0.0742 | +0.0127 |
| U.S. TOTALS | 24,317,236 | 17,830,271 | -6,486,965 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 32

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU IV

| | 1980 EPA * ESTIMATE | 1982 EPA * ASSESSMENT | 2000 POP. | 1980 COSTS ** PER CAPITA | 1982 COSTS ** PER CAPITA | CHANGE IN PER ** CAPITA COSTS |
|---|---|---|---|---|---|---|
| ALABAMA | 1,029,982 | 1,176,325 | 4,140 | 248 | 284 | +36 |
| ALASKA | 560,280 | 396,246 | 694 | 807 | 571 | -236 |
| ARIZONA | 691,674 | 623,055 | 4,357 | 158 | 143 | -15 |
| ARKANSAS | 565,452 | 557,130 | 2,970 | 190 | 187 | -3 |
| CALIFORNIA | 7,126,075 | 5,029,973 | 26,786 | 266 | 187 | -79 |
| COLORADO | 1,056,188 | 509,435 | 4,371 | 241 | 116 | -125 |
| CONNECTICUT | 1,228,871 | 1,404,510 | 3,902 | 314 | 359 | +45 |
| DELAWARE | 303,370 | 144,249 | 841 | 360 | 171 | -189 |
| DIST. OF COLUM. | 26,406 | 15,509 | 694 | 38 | 22 | -16 |
| FLORIDA | 5,587,410 | 4,542,047 | 15,049 | 371 | 304 | -67 |
| GEORGIA | 1,544,271 | 1,538,000 | 7,053 | 218 | 218 | +0 |
| HAWAII | 932,708 | 589,561 | 1,366 | 682 | 431 | -251 |
| IDAHO | 480,644 | 351,935 | 1,183 | 406 | 297 | -109 |
| ILLINOIS | 2,618,881 | 2,373,667 | 12,358 | 211 | 192 | -19 |
| INDIANA | 1,254,873 | 983,128 | 6,059 | 207 | 162 | -45 |
| IOWA | 1,099,359 | 1,017,140 | 3,101 | 354 | 328 | -26 |
| KANSAS | 949,403 | 763,936 | 2,642 | 359 | 289 | -70 |
| KENTUCKY | 1,866,447 | 1,621,521 | 4,226 | 441 | 383 | -58 |
| LOUISIANA | 1,310,665 | 1,409,505 | 4,888 | 268 | 288 | +20 |
| MAINE | 650,242 | 585,094 | 1,222 | 532 | 478 | -54 |
| MARYLAND | 3,363,939 | 1,152,280 | 5,583 | 602 | 206 | -396 |
| MASSACHUSETTS | 3,006,013 | 3,163,587 | 6,736 | 446 | 469 | +23 |
| MICHIGAN | 3,525,327 | 3,081,359 | 10,314 | 341 | 298 | -43 |
| MINNESOTA | 1,405,233 | 1,160,341 | 4,505 | 311 | 257 | -54 |
| MISSISSIPPI | 962,302 | 804,009 | 2,740 | 351 | 293 | -58 |
| MISSOURI | 2,210,589 | 2,034,731 | 5,379 | 410 | 378 | -32 |
| MONTANA | 126,663 | 121,237 | 938 | 135 | 129 | -6 |
| NEBRASKA | 315,863 | 293,542 | 1,734 | 182 | 169 | -13 |
| NEVADA | 275,970 | 220,216 | 1,408 | 196 | 156 | -40 |
| NEW HAMPSHIRE | 995,790 | 986,328 | 1,306 | 762 | 734 | -23 |
| NEW JERSEY | 4,164,482 | 4,200,363 | 9,022 | 461 | 465 | +4 |
| NEW MEXICO | 221,479 | 250,593 | 1,781 | 124 | 140 | +16 |
| NEW YORK | 12,344,059 | 11,674,194 | 19,683 | 628 | 593 | -35 |
| NORTH CAROLINA | 1,978,049 | 1,775,284 | 7,419 | 266 | 239 | -27 |
| NORTH DAKOTA | 62,289 | 65,027 | 693 | 90 | 65 | -25 |
| OHIO | 3,804,629 | 3,433,201 | 12,237 | 310 | 280 | -30 |
| OKLAHOMA | 711,371 | 514,867 | 3,702 | 192 | 139 | -53 |
| OREGON | 1,116,082 | 885,869 | 3,209 | 347 | 276 | -71 |
| PENNSYLVANIA | 3,460,607 | 3,744,318 | 12,854 | 300 | 291 | -9 |
| RHODE ISLAND | 696,068 | 495,183 | 1,084 | 642 | 456 | -186 |
| SOUTH CAROLINA | 993,190 | 1,027,403 | 3,700 | 268 | 277 | +9 |
| SOUTH DAKOTA | 211,226 | 160,034 | 730 | 289 | 219 | -70 |
| TENNESSEE | 1,858,771 | 1,801,163 | 5,573 | 333 | 323 | -10 |
| TEXAS | 4,942,117 | 3,971,990 | 21,000 | 237 | 189 | -48 |
| UTAH | 451,435 | 302,287 | 1,963 | 229 | 286 | +57 |
| VERMONT | 259,014 | 238,758 | 807 | 426 | 393 | -33 |
| VIRGINIA | 1,741,914 | 1,626,955 | 6,755 | 257 | 241 | -16 |
| WASHINGTON | 2,597,165 | 2,498,926 | 4,859 | 534 | 512 | -22 |
| WEST VIRGINIA | 1,207,736 | 1,449,124 | 2,101 | 574 | 689 | +115 |
| WISCONSIN | 2,146,880 | 2,061,234 | 5,553 | 386 | 371 | -15 |
| WYOMING | 154,000 | 126,867 | 484 | 318 | 262 | -56 |
| AMERICAN SAMOA | 66,386 | 55,337 | 48 | 1,659 | 1,383 | -276 |
| GUAM | 27,870 | 38,754 | 275 | 101 | 140 | +39 |
| MARIANAS GROUP | 71,074 | 63,502 | 33 | 2,153 | 1,924 | -229 |
| PUERTO RICO | 1,318,533 | 1,113,541 | 4,700 | 280 | 236 | -44 |
| PAC. TR. TERR. | 125,320 | 106,114 | 183 | 684 | 579 | -105 |
| VIRGIN ISLANDS | 53,970 | 42,101 | 116 | 465 | 362 | -103 |
| U.S. TOTALS | 94,316,692 | 82,624,322 | 278,888 | 338 | 296 | -42 |

** IN DOLLARS PER PERSON

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA DOLLAR ASSESSMENTS WITH STATE DOLLAR ASSESSMENTS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH V

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 1,176,325 | 1,176,325 | +0 | 0.9925 | 0.9938 | +0.0012 |
| ALASKA | 414,674 | 414,674 | +0 | 0.3498 | 0.3503 | +0.0004 |
| ARIZONA | 623,055 | 623,055 | +0 | 0.5257 | 0.5263 | +0.0006 |
| ARKANSAS | 557,139 | 557,139 | +0 | 0.4701 | 0.4707 | +0.0005 |
| CALIFORNIA | 5,714,478 | 5,595,930 | -138,548 | 4.8387 | 4.7277 | -0.1109 |
| COLORADO | 550,982 | 550,982 | +0 | 0.4649 | 0.4654 | +0.0005 |
| CONNECTICUT | 2,179,782 | 2,179,782 | +0 | 1.8392 | 1.8415 | +0.0023 |
| DELAWARE | 436,359 | 436,359 | +0 | 0.3681 | 0.3686 | +0.0004 |
| DIST. OF COLUM. | 83,628 | 83,628 | +0 | 0.0705 | 0.0706 | +0.0000 |
| FLORIDA | 4,590,573 | 4,590,573 | +0 | 3.8734 | 3.8783 | +0.0048 |
| GEORGIA | 1,952,737 | 1,952,737 | +0 | 1.6477 | 1.6497 | +0.0020 |
| HAWAII | 589,561 | 589,561 | +0 | 0.4974 | 0.4980 | +0.0006 |
| IDAHO | 468,315 | 468,315 | +0 | 0.3951 | 0.3956 | +0.0004 |
| ILLINOIS | 4,469,689 | 4,469,689 | +0 | 3.7714 | 3.7762 | +0.0047 |
| INDIANA | 3,950,367 | 3,950,367 | +0 | 3.3332 | 3.3374 | +0.0041 |
| IOWA | 1,443,732 | 1,443,732 | +0 | 1.2182 | 1.2197 | +0.0015 |
| KANSAS | 1,156,997 | 1,156,997 | +0 | 0.9762 | 0.9774 | +0.0012 |
| KENTUCKY | 3,072,413 | 3,072,413 | +0 | 2.5924 | 2.5957 | +0.0032 |
| LOUISIANA | 1,409,505 | 1,409,505 | +0 | 1.1893 | 1.1908 | +0.0014 |
| MAINE | 1,414,656 | 1,414,656 | +0 | 1.1936 | 1.1951 | +0.0015 |
| MARYLAND | 1,227,421 | 1,227,421 | +0 | 1.0356 | 1.0369 | +0.0013 |
| MASSACHUSETTS | 5,153,961 | 5,153,961 | +0 | 4.3488 | 4.3543 | +0.0054 |
| MICHIGAN | 5,238,816 | 5,238,816 | +0 | 4.4204 | 4.4260 | +0.0055 |
| MINNESOTA | 1,481,062 | 1,481,062 | +0 | 1.2497 | 1.2512 | +0.0015 |
| MISSISSIPPI | 804,009 | 804,009 | +0 | 0.6784 | 0.6792 | +0.0008 |
| MISSOURI | 3,082,167 | 3,082,167 | +0 | 2.6007 | 2.6039 | +0.0032 |
| MONTANA | 285,256 | 285,256 | +0 | 0.2406 | 0.2409 | +0.0003 |
| NEBRASKA | 366,325 | 366,325 | +0 | 0.3091 | 0.3094 | +0.0003 |
| NEVADA | 220,216 | 220,216 | +0 | 0.1858 | 0.1860 | +0.0002 |
| NEW HAMPSHIRE | 1,409,814 | 1,409,814 | +0 | 1.1895 | 1.1910 | +0.0014 |
| NEW JERSEY | 6,215,857 | 6,215,857 | +0 | 5.2448 | 5.2514 | +0.0065 |
| NEW MEXICO | 250,593 | 250,593 | +0 | 0.2114 | 0.2117 | +0.0002 |
| NEW YORK | 17,294,579 | 17,294,579 | +0 | 14.5930 | 14.6113 | +0.0183 |
| NORTH CAROLINA | 1,778,227 | 1,778,227 | +0 | 1.5004 | 1.5023 | +0.0018 |
| NORTH DAKOTA | 58,358 | 58,358 | +0 | 0.0492 | 0.0493 | +0.0000 |
| OHIO | 7,311,932 | 7,311,932 | +0 | 6.1697 | 6.1775 | +0.0077 |
| OKLAHOMA | 514,867 | 514,867 | +0 | 0.4344 | 0.4349 | +0.0005 |
| OREGON | 1,559,891 | 1,559,891 | +0 | 1.3162 | 1.3178 | +0.0016 |
| PENNSYLVANIA | 6,390,423 | 6,390,423 | +0 | 5.3921 | 5.3989 | +0.0067 |
| RHODE ISLAND | 672,795 | 672,795 | +0 | 0.5676 | 0.5684 | +0.0007 |
| SOUTH CAROLINA | 1,027,403 | 1,027,403 | +0 | 0.8669 | 0.8680 | +0.0010 |
| SOUTH DAKOTA | 203,931 | 203,931 | +0 | 0.1720 | 0.1722 | +0.0002 |
| TENNESSEE | 2,148,003 | 2,148,003 | +0 | 1.8124 | 1.8147 | +0.0022 |
| TEXAS | 4,003,724 | 3,993,419 | -10,305 | 3.3783 | 3.3738 | -0.0044 |
| UTAH | 564,884 | 564,884 | +0 | .4766 | 0.4772 | +0.0005 |
| VERMONT | 500,252 | 500,252 | +0 | .4221 | 0.4226 | +0.0005 |
| VIRGINIA | 1,907,595 | 1,907,595 | +0 | .6096 | 1.6116 | +0.0020 |
| WASHINGTON | 3,781,359 | 3,781,359 | +0 | .1906 | 3.1946 | +0.0040 |
| WEST VIRGINIA | 2,616,679 | 2,616,679 | +0 | .2079 | 2.2107 | +0.0027 |
| WISCONSIN | 2,430,884 | 2,430,884 | +0 | .9511 | 2.0537 | +0.0025 |
| WYOMING | 145,554 | 145,554 | +0 | .1228 | 0.1229 | +0.0001 |
| AMERICAN SAMOA | 55,337 | 55,337 | +0 | .0466 | 0.0467 | +0.0000 |
| GUAM | 38,754 | 38,754 | +0 | .0327 | 0.0327 | +0.0000 |
| MARIANAS GROUP | 63,502 | 63,502 | +0 | .0535 | 0.0536 | +0.0000 |
| PUERTO RICO | 1,285,098 | 1,285,098 | +0 | .1083 | 1.0857 | +0.0013 |
| PAC. TR. TERR. | 106,114 | 106,114 | +0 | 0.0895 | 0.0896 | +0.0001 |
| VIRGIN ISLANDS | 42,101 | 42,101 | +0 | 0.0355 | 0.0355 | +0.0000 |
| U.S. TOTALS | 118,512,710 | 118,363,857 | -148,853 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 34

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 468,124 | 468,124 | +0 | 1.2690 | 1.2693 | +0.0003 |
| ALASKA | 180,010 | 180,010 | +0 | 0.4880 | 0.4881 | +0.0001 |
| ARIZONA | 283,823 | 283,823 | +0 | 0.7694 | 0.7695 | +0.0001 |
| ARKANSAS | 305,950 | 305,950 | +0 | 0.8294 | 0.8295 | +0.0001 |
| CALIFORNIA | 2,579,017 | 2,579,017 | +0 | 6.9917 | 6.9930 | +0.0013 |
| COLORADO | 327,506 | 327,506 | +0 | 0.8878 | 0.8880 | +0.0002 |
| CONNECTICUT | 423,546 | 423,546 | +0 | 1.1482 | 1.1484 | +0.0002 |
| DELAWARE | 62,752 | 62,752 | +0 | 0.1701 | 0.1701 | +0.0000 |
| DIST. OF COLUM. | 9,036 | 9,036 | +0 | 0.0244 | 0.0245 | +0.0001 |
| FLORIDA | 1,951,022 | 1,951,022 | +0 | 5.2892 | 5.2902 | +0.0010 |
| GEORGIA | 730,677 | 730,677 | +0 | 1.9808 | 1.9812 | +0.0004 |
| HAWAII | 181,540 | 181,540 | +0 | 0.4921 | 0.4922 | +0.0001 |
| IDAHO | 171,822 | 171,822 | +0 | 0.4658 | 0.4658 | +0.0000 |
| ILLINOIS | 1,543,949 | 1,543,949 | +0 | 4.2398 | 4.2406 | +0.0008 |
| INDIANA | 463,920 | 463,920 | +0 | 1.2576 | 1.2579 | +0.0003 |
| IOWA | 585,127 | 585,127 | +0 | 1.5862 | 1.5865 | +0.0003 |
| KANSAS | 254,874 | 254,874 | +0 | 0.6909 | 0.6910 | +0.0001 |
| KENTUCKY | 509,897 | 509,897 | +0 | 1.3823 | 1.3825 | +0.0002 |
| LOUISIANA | 558,788 | 558,788 | +0 | 1.5148 | 1.5151 | +0.0003 |
| MAINE | 200,362 | 200,362 | +0 | 0.5431 | 0.5432 | +0.0001 |
| MARYLAND | 458,529 | 458,529 | +0 | 1.2430 | 1.2433 | +0.0003 |
| MASSACHUSETTS | 1,498,214 | 1,498,214 | +0 | 4.0616 | 4.0624 | +0.0008 |
| MICHIGAN | 1,625,789 | 1,625,789 | +0 | 4.4075 | 4.4083 | +0.0008 |
| MINNESOTA | 784,842 | 784,842 | +0 | 1.9886 | 1.9890 | +0.0004 |
| MISSISSIPPI | 426,569 | 426,569 | +0 | 1.1564 | 1.1566 | +0.0002 |
| MISSOURI | 1,086,555 | 1,086,555 | +0 | 2.9456 | 2.9462 | +0.0006 |
| MONTANA | 46,812 | 46,812 | +0 | 0.1269 | 0.1269 | +0.0000 |
| NEBRASKA | 196,560 | 196,560 | +0 | 0.5328 | 0.5329 | +0.0001 |
| NEVADA | 138,222 | 138,222 | +0 | 0.3747 | 0.3747 | +0.0000 |
| NEW HAMPSHIRE | 324,987 | 324,987 | +0 | 0.8810 | 0.8812 | +0.0002 |
| NEW JERSEY | 2,541,287 | 2,541,287 | +0 | 6.8894 | 6.8907 | +0.0013 |
| NEW MEXICO | 150,839 | 150,839 | +0 | 0.4089 | 0.4090 | +0.0001 |
| NEW YORK | 4,007,200 | 4,007,200 | +0 | 10.8635 | 10.8656 | +0.0021 |
| NORTH CAROLINA | 612,967 | 612,967 | +0 | 1.6617 | 1.6620 | +0.0003 |
| NORTH DAKOTA | 30,933 | 30,933 | +0 | 0.0838 | 0.0838 | +0.0000 |
| OHIO | 1,687,367 | 1,687,367 | +0 | 4.5744 | 4.5753 | +0.0009 |
| OKLAHOMA | 256,768 | 256,768 | +0 | 0.6961 | 0.6962 | +0.0001 |
| OREGON | 227,865 | 227,865 | +0 | 0.6177 | 0.6178 | +0.0001 |
| PENNSYLVANIA | 1,625,405 | 1,625,405 | +0 | 4.4066 | 4.4073 | +0.0009 |
| RHODE ISLAND | 207,107 | 207,107 | +0 | 0.5614 | 0.5615 | +0.0001 |
| SOUTH CAROLINA | 239,048 | 239,048 | +0 | 0.6480 | 0.6481 | +0.0001 |
| SOUTH DAKOTA | 123,372 | 123,372 | +0 | 0.3344 | 0.3345 | +0.0001 |
| TENNESSEE | 622,928 | 622,928 | +0 | 1.6887 | 1.6890 | +0.0003 |
| TEXAS | 1,924,327 | 1,917,345 | -6,982 | 5.2168 | 5.1989 | -0.0178 |
| UTAH | 421,599 | 421,599 | +0 | 1.1429 | 1.1431 | +0.0002 |
| VERMONT | 119,954 | 119,954 | +0 | 0.3251 | 0.3252 | +0.0001 |
| VIRGINIA | 761,112 | 761,112 | +0 | 2.0633 | 2.0637 | +0.0004 |
| WASHINGTON | 899,478 | 899,478 | +0 | 2.4378 | 2.4402 | +0.0024 |
| WEST VIRGINIA | 456,821 | 456,821 | +0 | 1.2384 | 1.2386 | +0.0002 |
| WISCONSIN | 1,039,246 | 1,039,246 | +0 | 2.8174 | 2.8179 | +0.0005 |
| WYOMING | 99,083 | 99,083 | +0 | 0.2686 | 0.2686 | +0.0000 |
| AMERICAN SAMOA | 22,748 | 22,748 | +0 | 0.0616 | 0.0616 | +0.0000 |
| GUAM | 22,958 | 22,958 | +0 | 0.0622 | 0.0622 | +0.0000 |
| MARIANAS GROUP | 16,992 | 16,992 | +0 | 0.0460 | 0.0460 | +0.0000 |
| PUERTO RICO | 375,333 | 375,333 | +0 | 1.0175 | 1.0177 | +0.0002 |
| PAC. TR. TERR. | 60,378 | 60,378 | +0 | 0.1636 | 0.1637 | +0.0001 |
| VIRGIN ISLANDS | 15,001 | 15,001 | +0 | 0.0406 | 0.0406 | +0.0000 |
| U.S. TOTALS | 36,886,621 | 36,879,639 | -6,982 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 88,114 | 88,114 | +0 | 3.2684 | 3.4454 | +0.1770 |
| ALASKA | 2,218 | 2,218 | +0 | 0.0822 | 0.0867 | +0.0045 |
| ARIZONA | 1,050 | 1,050 | +0 | 0.0389 | 0.0410 | +0.0021 |
| ARKANSAS | 18,539 | 18,539 | +0 | 0.6876 | 0.7249 | +0.0373 |
| CALIFORNIA | 200,417 | 61,869 | -138,548 | 7.4340 | 2.4192 | -5.0147 |
| COLORADO | 5,919 | 5,919 | +0 | 0.2195 | 0.2314 | +0.0119 |
| CONNECTICUT | 23,580 | 23,580 | +0 | 0.8746 | 0.9220 | +0.0474 |
| DELAWARE | 941 | 941 | +0 | 0.0349 | 0.0367 | +0.0018 |
| DIST. OF COLUM. | 6,473 | 6,473 | +0 | 0.2401 | 0.2531 | +0.0130 |
| FLORIDA | 77,471 | 77,471 | +0 | 2.8736 | 3.0292 | +0.1556 |
| GEORGIA | 94,145 | 94,145 | +0 | 3.4921 | 3.6812 | +0.1891 |
| HAWAII | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| IDAHO | 7,044 | 7,044 | +0 | 0.2612 | 0.2754 | +0.0142 |
| ILLINOIS | 178,019 | 178,019 | +0 | 6.6032 | 6.9609 | +0.3577 |
| INDIANA | 47,577 | 47,577 | +0 | 1.7647 | 1.8603 | +0.0956 |
| IOWA | 85,729 | 85,729 | +0 | 3.1799 | 3.3522 | +0.1723 |
| KANSAS | 50,717 | 50,717 | +0 | 1.8812 | 1.9831 | +0.1019 |
| KENTUCKY | 104,413 | 104,413 | +0 | 3.8729 | 4.0827 | +0.2099 |
| LOUISIANA | 76,993 | 76,993 | +0 | 2.8558 | 3.0106 | +0.1548 |
| MAINE | 17,973 | 17,973 | +0 | 0.6666 | 0.7027 | +0.0361 |
| MARYLAND | 13,649 | 13,649 | +0 | 0.5062 | 0.5336 | +0.0274 |
| MASSACHUSETTS | 20,528 | 20,528 | +0 | 0.7614 | 0.8026 | +0.0412 |
| MICHIGAN | 73,344 | 73,344 | +0 | 2.7205 | 2.8679 | +0.1474 |
| MINNESOTA | 28,488 | 28,488 | +0 | 1.0567 | 1.1139 | +0.0572 |
| MISSISSIPPI | 55,271 | 55,271 | +0 | 2.0501 | 2.1612 | +0.1111 |
| MISSOURI | 37,624 | 37,624 | +0 | 1.3955 | 1.4711 | +0.0756 |
| MONTANA | 1,459 | 1,459 | +0 | 0.0541 | 0.0570 | +0.0029 |
| NEBRASKA | 637 | 637 | +0 | 0.0236 | 0.0248 | +0.0012 |
| NEVADA | 2,560 | 2,560 | +0 | 0.0949 | 0.1000 | +0.0051 |
| NEW HAMPSHIRE | 9,533 | 9,533 | +0 | 0.3536 | 0.3727 | +0.0191 |
| NEW JERSEY | 226,954 | 226,954 | +0 | 8.4183 | 8.8744 | +0.4561 |
| NEW MEXICO | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| NEW YORK | 186,072 | 186,072 | +0 | 6.9019 | 7.2758 | +0.3739 |
| NORTH CAROLINA | 87,345 | 87,345 | +0 | 3.2398 | 3.4153 | +0.1756 |
| NORTH DAKOTA | 441 | 441 | +0 | 0.0163 | 0.0172 | +0.0009 |
| OHIO | 135,785 | 135,785 | +0 | 5.0366 | 5.3095 | +0.2729 |
| OKLAHOMA | 13,904 | 13,904 | +0 | 0.5157 | 0.5436 | +0.0279 |
| OREGON | 71,071 | 71,071 | +0 | 2.6362 | 2.7790 | +0.1428 |
| PENNSYLVANIA | 15,837 | 15,837 | +0 | 0.5874 | 0.6192 | +0.0318 |
| RHODE ISLAND | 2,771 | 2,771 | +0 | 0.1027 | 0.1083 | +0.0056 |
| SOUTH CAROLINA | 76,292 | 76,292 | +0 | 2.8298 | 2.9831 | +0.1533 |
| SOUTH DAKOTA | 2,606 | 2,606 | +0 | 0.0966 | 0.1018 | +0.0052 |
| TENNESSEE | 153,873 | 153,873 | +0 | 5.7074 | 6.0168 | +0.3092 |
| TEXAS | 181,791 | 181,791 | +0 | 6.7431 | 7.1084 | +0.3653 |
| UTAH | 11,450 | 11,450 | +0 | 0.4247 | 0.4477 | +0.0230 |
| VERMONT | 7,648 | 7,648 | +0 | 0.2833 | 0.2987 | +0.0154 |
| VIRGINIA | 18,199 | 18,199 | +0 | 0.6750 | 0.7116 | +0.0366 |
| WASHINGTON | 115,894 | 115,894 | +0 | 4.2988 | 4.5317 | +0.2329 |
| WEST VIRGINIA | 4,423 | 4,423 | +0 | 0.1640 | 0.1729 | +0.0089 |
| WISCONSIN | 32,048 | 32,048 | +0 | 1.1887 | 1.2531 | +0.0644 |
| WYOMING | 1,426 | 1,426 | +0 | 0.0528 | 0.0557 | +0.0029 |
| AMERICAN SAMOA | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| GUAM | 922 | 922 | +0 | 0.0341 | 0.0360 | +0.0019 |
| MARIANAS GROUP | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| PUERTO RICO | 18,613 | 18,613 | +0 | 0.6904 | 0.7278 | +0.0374 |
| PAC. TR. TERR. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| VIRGIN ISLANDS | 148 | 148 | +0 | 0.0054 | 0.0057 | +0.0003 |
| U.S. TOTALS | 2,695,930 | 2,557,382 | -138,548 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 36

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE | 1982 STATE ESTIMATE | 1982 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 260,447 | 260,447 | +0 | 1.4606 | 1.4606 | +0.0002 |
| ALASKA | 115,217 | 115,217 | +0 | 0.6460 | 0.6461 | +0.0001 |
| ARIZONA | 150,412 | 150,012 | +0 | 0.8411 | 0.8413 | +0.0002 |
| ARKANSAS | 104,408 | 104,408 | +0 | 0.5856 | 0.5855 | +0.0001 |
| CALIFORNIA | 745,658 | 745,658 | +0 | 4.1811 | 4.1819 | +0.0008 |
| COLORADO | 145,928 | 145,928 | +0 | 0.8182 | 0.8184 | +0.0002 |
| CONNECTICUT | 254,345 | 254,345 | +0 | 1.4262 | 1.4264 | +0.0002 |
| DELAWARE | 37,205 | 37,205 | +0 | 0.2086 | 0.2086 | +0.0000 |
| DIST. OF COLUM. | 0 | 0 | +0 | 0.0000 | 0.0000 | +0.0000 |
| FLORIDA | 1,334,415 | 1,334,415 | +0 | 7.4825 | 7.4839 | +0.0014 |
| GEORGIA | 373,687 | 373,687 | +0 | 2.0954 | 2.0957 | +0.0003 |
| HAWAII | 106,837 | 106,837 | +0 | 0.5990 | 0.5991 | +0.0001 |
| IDAHO | 62,600 | 62,600 | +0 | 0.3510 | 0.3510 | +0.0000 |
| ILLINOIS | 366,402 | 366,402 | +0 | 2.0545 | 2.0549 | +0.0004 |
| INDIANA | 174,842 | 174,842 | +0 | 0.9804 | 0.9805 | +0.0001 |
| IOWA | 222,098 | 222,098 | +0 | 1.2453 | 1.2456 | +0.0003 |
| KANSAS | 308,728 | 308,728 | +0 | 1.7311 | 1.7314 | +0.0003 |
| KENTUCKY | 524,396 | 524,396 | +0 | 2.9404 | 2.9410 | +0.0006 |
| LOUISIANA | 367,080 | 367,080 | +0 | 2.0583 | 2.0587 | +0.0004 |
| MAINE | 133,591 | 133,591 | +0 | 0.7490 | 0.7492 | +0.0002 |
| MARYLAND | 282,920 | 282,920 | +0 | 1.5864 | 1.5867 | +0.0003 |
| MASSACHUSETTS | 740,746 | 740,746 | +0 | 4.1536 | 4.1544 | +0.0008 |
| MICHIGAN | 692,299 | 692,299 | +0 | 3.8819 | 3.8827 | +0.0008 |
| MINNESOTA | 253,177 | 253,177 | +0 | 1.4196 | 1.4199 | +0.0003 |
| MISSISSIPPI | 186,516 | 186,516 | +0 | 1.0458 | 1.0460 | +0.0002 |
| MISSOURI | 609,188 | 609,188 | +0 | 3.4159 | 3.4165 | +0.0006 |
| MONTANA | 36,510 | 36,510 | +0 | 0.2047 | 0.2047 | +0.0000 |
| NEBRASKA | 66,433 | 66,433 | +0 | 0.3725 | 0.3725 | +0.0000 |
| NEVADA | 29,213 | 29,213 | +0 | 0.1638 | 0.1638 | +0.0000 |
| NEW HAMPSHIRE | 315,164 | 315,164 | +0 | 1.7672 | 1.7675 | +0.0003 |
| NEW JERSEY | 852,199 | 852,199 | +0 | 4.7786 | 4.7794 | +0.0008 |
| NEW MEXICO | 52,602 | 52,602 | +0 | 0.2949 | 0.2950 | +0.0001 |
| NEW YORK | 1,051,246 | 1,051,246 | +0 | 5.8947 | 5.8958 | +0.0011 |
| NORTH CAROLINA | 564,780 | 564,780 | +0 | 3.1669 | 3.1675 | +0.0006 |
| NORTH DAKOTA | 10,736 | 10,736 | +0 | 0.0602 | 0.0602 | +0.0000 |
| OHIO | 781,669 | 781,669 | +0 | 4.3831 | 4.3839 | +0.0008 |
| OKLAHOMA | 117,542 | 117,542 | +0 | 0.6591 | 0.6592 | +0.0001 |
| OREGON | 206,026 | 206,026 | +0 | 1.1552 | 1.1554 | +0.0002 |
| PENNSYLVANIA | 491,367 | 491,367 | +0 | 2.7552 | 2.7557 | +0.0005 |
| RHODE ISLAND | 88,722 | 88,722 | +0 | 0.4974 | 0.4975 | +0.0001 |
| SOUTH CAROLINA | 354,395 | 354,395 | +0 | 1.9872 | 1.9875 | +0.0003 |
| SOUTH DAKOTA | 30,094 | 30,094 | +0 | 0.1687 | 0.1687 | +0.0000 |
| TENNESSEE | 520,378 | 520,378 | +0 | 2.9179 | 2.9184 | +0.0005 |
| TEXAS | 1,258,140 | 1,254,867 | -3,323 | 7.0551 | 7.0378 | -0.0172 |
| UTAH | 61,627 | 61,627 | +0 | 0.3455 | 0.3456 | +0.0001 |
| VERMONT | 31,298 | 31,298 | +0 | 0.1755 | 0.1755 | +0.0000 |
| VIRGINIA | 345,857 | 345,857 | +0 | 1.9393 | 1.9397 | +0.0004 |
| WASHINGTON | 724,197 | 724,197 | +0 | 4.0608 | 4.0616 | +0.0008 |
| WEST VIRGINIA | 237,770 | 237,770 | +0 | 1.3332 | 1.3335 | +0.0003 |
| WISCONSIN | 620,591 | 620,591 | +0 | 3.4798 | 3.4805 | +0.0007 |
| WYOMING | 23,366 | 23,366 | +0 | 0.1310 | 0.1310 | +0.0000 |
| AMERICAN SAMOA | 26,072 | 26,072 | +0 | 0.1461 | 0.1462 | +0.0001 |
| GUAM | 7,314 | 7,314 | +0 | 0.0410 | 0.0410 | +0.0000 |
| MARIANAS GROUP | 24,479 | 24,479 | +0 | 0.1372 | 0.1372 | +0.0000 |
| PUERTO RICO | 316,846 | 316,846 | +0 | 1.7766 | 1.7770 | +0.0004 |
| PAC. TR. TERR. | 20,931 | 20,931 | +0 | 0.1173 | 0.1173 | +0.0000 |
| VIRGIN ISLANDS | 13,238 | 13,238 | +0 | 0.0742 | 0.0742 | +0.0000 |
| U.S. TOTALS | 17,833,594 | 17,830,271 | -3,323 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THRU IV

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 800,647 | 1,176,325 | +375,678 | 1.4081 | 1.4237 | +0.0155 |
| ALASKA | 230,873 | 396,286 | +165,413 | 0.4060 | 0.4796 | +0.0735 |
| ARIZONA | 277,270 | 623,055 | +345,785 | 0.4876 | 0.7540 | +0.2664 |
| ARKANSAS | 288,310 | 557,139 | +268,829 | 0.5070 | 0.6743 | +0.1672 |
| CALIFORNIA | 2,638,685 | 5,029,973 | +2,391,288 | 4.6409 | 6.0877 | +1.4468 |
| COLORADO | 151,755 | 509,435 | +357,680 | 0.2669 | 0.6165 | +0.3496 |
| CONNECTICUT | 1,157,181 | 1,404,510 | +247,329 | 2.0352 | 1.6998 | -0.3353 |
| DELAWARE | 79,974 | 144,249 | +64,275 | 0.1406 | 0.1745 | +0.0339 |
| DIST. OF COLUM. | 15,509 | 15,509 | +0 | 0.0272 | 0.0187 | -0.0085 |
| FLORIDA | 2,268,938 | 4,582,047 | +2,313,109 | 3.9906 | 5.5456 | +1.5549 |
| GEORGIA | 854,674 | 1,538,000 | +683,326 | 1.5032 | 1.8614 | +0.3582 |
| HAWAII | 333,987 | 589,561 | +255,574 | 0.5874 | 0.7135 | +0.1261 |
| IDAHO | 207,267 | 351,935 | +144,668 | 0.3645 | 0.4259 | +0.0614 |
| ILLINOIS | 1,435,815 | 2,373,667 | +937,852 | 2.5253 | 2.8728 | +0.3475 |
| INDIANA | 737,378 | 983,128 | +245,750 | 1.2969 | 1.1898 | -0.1070 |
| IOWA | 726,947 | 1,017,140 | +290,193 | 1.2785 | 1.2310 | -0.0475 |
| KANSAS | 462,074 | 763,936 | +301,862 | 0.8127 | 0.9245 | +0.1118 |
| KENTUCKY | 1,044,918 | 1,621,521 | +572,603 | 1.8468 | 1.9625 | +0.1176 |
| LOUISIANA | 791,091 | 1,409,505 | +618,474 | 1.3912 | 1.7059 | +0.3146 |
| MAINE | 490,934 | 585,094 | +94,158 | 0.8634 | 0.7081 | -0.1553 |
| MARYLAND | 755,481 | 1,152,280 | +396,879 | 1.3286 | 1.3946 | +0.0659 |
| MASSACHUSETTS | 2,757,337 | 3,163,587 | +406,250 | 4.8496 | 3.8288 | -1.0207 |
| MICHIGAN | 2,365,964 | 3,081,359 | +715,395 | 4.1612 | 3.7293 | -0.4319 |
| MINNESOTA | 784,948 | 1,160,341 | +375,393 | 1.3805 | 1.4043 | +0.0237 |
| MISSISSIPPI | 509,129 | 804,009 | +294,880 | 0.8954 | 0.9730 | +0.0776 |
| MISSOURI | 1,268,912 | 2,034,731 | +765,819 | 2.2317 | 2.4626 | +0.2308 |
| MONTANA | 71,244 | 121,237 | +49,993 | 0.1253 | 0.1467 | +0.0214 |
| NEBRASKA | 159,461 | 293,542 | +134,081 | 0.2804 | 0.3552 | +0.0748 |
| NEVADA | 109,449 | 220,214 | +110,747 | 0.1925 | 0.2665 | +0.0739 |
| NEW HAMPSHIRE | 715,565 | 966,026 | +250,471 | 1.2585 | 1.1691 | -0.0893 |
| NEW JERSEY | 3,410,822 | 4,200,363 | +789,541 | 5.9990 | 5.0836 | -0.9153 |
| NEW MEXICO | 121,219 | 250,593 | +129,374 | 0.2132 | 0.3032 | +0.0900 |
| NEW YORK | 10,508,152 | 11,674,194 | +1,166,042 | 18.4818 | 14.1292 | -4.3526 |
| NORTH CAROLINA | 1,067,142 | 1,775,284 | +708,122 | 1.8769 | 2.1486 | +0.2716 |
| NORTH DAKOTA | 19,261 | 45,027 | +25,766 | 0.0338 | 0.0544 | +0.0206 |
| OHIO | 2,446,629 | 3,433,201 | +986,572 | 4.3031 | 4.1551 | -0.1479 |
| OKLAHOMA | 275,988 | 514,867 | +238,879 | 0.4854 | 0.6231 | +0.1377 |
| OREGON | 600,329 | 885,869 | +285,540 | 1.0558 | 1.0721 | +0.0162 |
| PENNSYLVANIA | 2,707,936 | 3,744,310 | +1,036,374 | 4.7627 | 4.5317 | -0.2310 |
| RHODE ISLAND | 450,076 | 495,183 | +45,107 | 0.7916 | 0.5993 | -0.1922 |
| SOUTH CAROLINA | 672,075 | 1,027,403 | +355,328 | 1.1820 | 1.2434 | +0.0614 |
| SOUTH DAKOTA | 85,391 | 160,094 | +74,703 | 0.1500 | 0.1936 | +0.0436 |
| TENNESSEE | 1,105,187 | 1,801,163 | +695,976 | 1.9438 | 2.1799 | +0.2361 |
| TEXAS | 2,031,650 | 3,971,990 | +1,940,340 | 3.5732 | 4.8072 | +1.2339 |
| UTAH | 209,262 | 542,287 | +333,025 | 0.3680 | 0.6805 | +0.3124 |
| VERMONT | 214,468 | 238,758 | +24,292 | 0.3772 | 0.2889 | -0.0882 |
| VIRGINIA | 1,189,888 | 1,629,955 | +439,087 | 2.0927 | 1.9715 | -0.1212 |
| WASHINGTON | 1,474,119 | 2,488,924 | +1,014,805 | 2.5927 | 3.0123 | +0.4196 |
| WEST VIRGINIA | 1,289,492 | 1,469,124 | +179,632 | 2.2328 | 1.7538 | -0.4789 |
| WISCONSIN | 1,472,364 | 2,061,234 | +588,870 | 2.5895 | 2.4947 | -0.0948 |
| WYOMING | 50,587 | 126,867 | +76,280 | 0.0889 | 0.1535 | +0.0645 |
| AMERICAN SAMOA | 36,234 | 55,337 | +19,103 | 0.0637 | 0.0669 | +0.0032 |
| GUAM | 18,533 | 38,754 | +20,221 | 0.0325 | 0.0469 | +0.0143 |
| MARIANAS GROUP | 39,557 | 63,502 | +23,945 | 0.0695 | 0.0768 | +0.0072 |
| PUERTO RICO | 782,611 | 1,113,541 | +330,930 | 1.3764 | 1.3477 | -0.0287 |
| PAC. TR. TERR. | 75,562 | 106,114 | +30,552 | 0.1328 | 0.1284 | -0.0044 |
| VIRGIN ISLANDS | 26,416 | 42,101 | +15,685 | 0.0464 | 0.0509 | +0.0044 |
| U.S. TOTALS | 56,856,457 | 82,624,322 | +25,767,865 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATEGORIES I, IIA, & IIB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 338,468 | 468,124 | +129,656 | 1.4154 | 1.2693 | -0.1460 |
| ALASKA | 100,587 | 180,010 | +79,423 | 0.4206 | 0.4881 | +0.0675 |
| ARIZONA | 115,590 | 283,823 | +168,233 | 0.4833 | 0.7695 | +0.2862 |
| ARKANSAS | 142,926 | 305,950 | +163,024 | 0.5977 | 0.8295 | +0.2318 |
| CALIFORNIA | 1,036,488 | 2,579,017 | +1,542,529 | 4.3344 | 6.9930 | +2.6586 |
| COLORADO | 121,700 | 327,506 | +205,806 | 0.5089 | 0.8880 | +0.3791 |
| CONNECTICUT | 367,596 | 423,546 | +55,950 | 1.5372 | 1.1484 | -0.3887 |
| DELAWARE | 24,469 | 62,752 | +38,283 | 0.1023 | 0.1701 | +0.0678 |
| DIST. OF COLUM. | 9,036 | 9,036 | +0 | 0.0377 | 0.0245 | -0.0131 |
| FLORIDA | 950,234 | 1,951,022 | +1,000,788 | 3.9737 | 5.2902 | +1.3165 |
| GEORGIA | 391,613 | 730,677 | +339,064 | 1.6376 | 1.9812 | +0.3436 |
| HAWAII | 76,862 | 181,540 | +104,678 | 0.3214 | 0.4922 | +0.1708 |
| IDAHO | 92,156 | 171,822 | +79,666 | 0.3853 | 0.4658 | +0.0805 |
| ILLINOIS | 829,970 | 1,563,949 | +733,979 | 3.4708 | 4.2406 | +0.7698 |
| INDIANA | 331,317 | 463,920 | +132,603 | 1.3855 | 1.2579 | -0.1275 |
| IOWA | 473,201 | 585,127 | +111,926 | 1.9788 | 1.5866 | -0.3922 |
| KANSAS | 155,973 | 254,874 | +98,901 | 0.6522 | 0.6910 | +0.0388 |
| KENTUCKY | 376,972 | 509,897 | +130,925 | 1.5848 | 1.3825 | -0.2022 |
| LOUISIANA | 211,684 | 558,788 | +347,104 | 0.8852 | 1.5151 | +0.6299 |
| MAINE | 167,275 | 200,362 | +33,087 | 0.6995 | 0.5432 | -0.1562 |
| MARYLAND | 334,146 | 458,529 | +124,383 | 1.3974 | 1.2433 | -0.1540 |
| MASSACHUSETTS | 1,337,408 | 1,498,214 | +160,806 | 5.5928 | 4.0624 | -1.5303 |
| MICHIGAN | 1,207,052 | 1,625,789 | +418,737 | 5.0477 | 4.4083 | -0.6393 |
| MINNESOTA | 428,412 | 704,042 | +275,630 | 1.7915 | 1.9090 | +0.1175 |
| MISSISSIPPI | 275,548 | 426,569 | +150,971 | 1.1525 | 1.1566 | +0.0041 |
| MISSOURI | 645,651 | 1,086,555 | +440,904 | 2.7000 | 2.9462 | +0.2462 |
| MONTANA | 28,713 | 46,812 | +18,099 | 0.1200 | 0.1269 | +0.0069 |
| NEBRASKA | 130,033 | 196,560 | +66,527 | 0.5437 | 0.5329 | -0.0107 |
| NEVADA | 62,775 | 138,222 | +75,447 | 0.2625 | 0.3747 | +0.1122 |
| NEW HAMPSHIRE | 238,211 | 324,987 | +94,776 | 0.9627 | 0.8812 | -0.0814 |
| NEW JERSEY | 2,126,069 | 2,541,287 | +415,218 | 8.8909 | 6.8907 | -2.0001 |
| NEW MEXICO | 74,249 | 150,839 | +76,590 | 0.3105 | 0.4090 | +0.0985 |
| NEW YORK | 3,469,503 | 4,007,200 | +537,697 | 14.5098 | 10.8656 | -3.6433 |
| NORTH CAROLINA | 426,877 | 612,967 | +186,090 | 1.7851 | 1.6620 | -0.1230 |
| NORTH DAKOTA | 12,787 | 38,933 | +18,146 | 0.0534 | 0.0838 | +0.0304 |
| OHIO | 1,156,524 | 1,687,367 | +530,843 | 4.8364 | 4.5753 | -0.2610 |
| OKLAHOMA | 111,327 | 256,788 | +145,461 | 0.4655 | 0.6962 | +0.2307 |
| OREGON | 116,145 | 227,865 | +111,670 | 0.4859 | 0.6178 | +0.1319 |
| PENNSYLVANIA | 1,087,812 | 1,625,405 | +537,593 | 4.5491 | 4.4073 | -0.1417 |
| RHODE ISLAND | 186,099 | 207,107 | +21,008 | 0.7782 | 0.5615 | -0.2166 |
| SOUTH CAROLINA | 159,235 | 239,048 | +79,813 | 0.6659 | 0.6481 | -0.0177 |
| SOUTH DAKOTA | 74,182 | 123,372 | +49,190 | 0.3102 | 0.3345 | +0.0243 |
| TENNESSEE | 426,385 | 622,420 | +196,615 | 1.7911 | 1.6890 | -0.1020 |
| TEXAS | 912,401 | 1,917,345 | +944,944 | 3.8992 | 5.1989 | +1.2997 |
| UTAH | 131,912 | 421,599 | +289,687 | 0.5516 | 1.1431 | +0.5915 |
| VERMONT | 104,818 | 119,954 | +15,136 | 0.4383 | 0.3252 | -0.1130 |
| VIRGINIA | 544,122 | 781,112 | +212,990 | 2.2921 | 2.0637 | -0.2283 |
| WASHINGTON | 482,424 | 899,978 | +417,546 | 2.0174 | 2.4402 | +0.4228 |
| WEST VIRGINIA | 378,527 | 456,821 | +78,294 | 1.5829 | 1.2386 | -0.3442 |
| WISCONSIN | 603,536 | 1,039,246 | +435,710 | 2.5239 | 2.8179 | +0.2940 |
| WYOMING | 43,178 | 99,083 | +55,905 | 0.1805 | 0.2686 | +0.0881 |
| AMERICAN SAMOA | 13,847 | 22,748 | +8,901 | 0.0579 | 0.0616 | +0.0037 |
| GUAM | 8,447 | 22,958 | +14,471 | 0.0354 | 0.0622 | +0.0268 |
| MARIANAS GROUP | 10,924 | 16,992 | +6,068 | 0.0456 | 0.0460 | +0.0004 |
| PUERTO RICO | 176,804 | 375,333 | +198,529 | 0.7393 | 1.0177 | +0.2784 |
| PAC. TR. TERR. | 41,353 | 60,378 | +19,025 | 0.1729 | 0.1637 | -0.0091 |
| VIRGIN ISLANDS | 10,979 | 15,001 | +4,023 | 0.0459 | 0.0406 | -0.0052 |
| U.S. TOTALS | 23,912,611 | 36,879,639 | +12,967,028 | 100.0000 | 100.0000 | +0.0000 |

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I, IIA, IIB, IIIA, & IVB

| | COSTS | | | PERCENTAGE OF NATIONAL TOTALS | | |
|---|---|---|---|---|---|---|
| | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE | 1982 BACKLOG | 2000 EPA ASSESSMENT | DIFFERENCE |
| ALABAMA | 500,016 | 816,685 | +316,669 | 1.4126 | 1.4260 | +0.0134 |
| ALASKA | 146,460 | 297,445 | +150,985 | 0.4137 | 0.5193 | +0.1056 |
| ARIZONA | 144,034 | 434,885 | +290,851 | 0.4069 | 0.7593 | +0.3524 |
| ARKANSAS | 193,341 | 428,897 | +235,556 | 0.5462 | 0.7489 | +0.2027 |
| CALIFORNIA | 1,384,761 | 3,386,544 | +2,001,783 | 3.9122 | 5.9135 | +2.0013 |
| COLORADO | 131,158 | 479,353 | +348,195 | 0.3705 | 0.8370 | +0.4665 |
| CONNECTICUT | 589,948 | 701,471 | +111,523 | 1.6667 | 1.2249 | -0.4417 |
| DELAWARE | 45,175 | 100,898 | +55,723 | 0.1276 | 0.1761 | +0.0485 |
| DIST. OF COLUM. | 15,509 | 15,509 | +0 | 0.0438 | 0.0270 | -0.0167 |
| FLORIDA | 1,398,307 | 3,362,908 | +1,964,601 | 3.9504 | 5.8723 | +1.9219 |
| GEORGIA | 608,759 | 1,198,509 | +589,750 | 1.7198 | 2.0928 | +0.3730 |
| HAWAII | 125,501 | 288,377 | +162,876 | 0.3545 | 0.5035 | +0.1490 |
| IDAHO | 127,410 | 241,466 | +114,056 | 0.3599 | 0.4216 | +0.0617 |
| ILLINOIS | 1,199,908 | 2,108,378 | +908,462 | 3.3899 | 3.6816 | +0.2917 |
| INDIANA | 486,769 | 686,339 | +199,570 | 1.3752 | 1.1984 | -0.1767 |
| IOWA | 615,868 | 892,954 | +277,086 | 1.7399 | 1.5592 | -0.1806 |
| KANSAS | 343,026 | 614,319 | +271,293 | 0.9691 | 1.0727 | +0.1036 |
| KENTUCKY | 644,688 | 1,138,706 | +494,018 | 1.8213 | 1.9884 | +0.1671 |
| LOUISIANA | 441,820 | 1,002,861 | +561,041 | 1.2482 | 1.7511 | +0.5029 |
| MAINE | 287,881 | 351,926 | +64,045 | 0.8133 | 0.6145 | -0.1987 |
| MARYLAND | 398,816 | 755,098 | +356,282 | 1.1267 | 1.3185 | +0.1918 |
| MASSACHUSETTS | 1,932,062 | 2,259,488 | +327,426 | 5.4584 | 3.9455 | -1.5128 |
| MICHIGAN | 1,760,178 | 2,391,432 | +631,254 | 4.9728 | 4.1759 | -0.7968 |
| MINNESOTA | 639,340 | 985,707 | +346,367 | 1.8062 | 1.7212 | -0.0849 |
| MISSISSIPPI | 392,766 | 668,356 | +275,590 | 1.1096 | 1.1670 | +0.0574 |
| MISSOURI | 1,009,786 | 1,733,367 | +723,581 | 2.8528 | 3.0268 | +0.1740 |
| MONTANA | 36,617 | 84,781 | +48,164 | 0.1034 | 0.1480 | +0.0446 |
| NEBRASKA | 137,712 | 263,630 | +125,918 | 0.3890 | 0.4603 | +0.0713 |
| NEVADA | 72,170 | 169,995 | +97,825 | 0.2038 | 0.2968 | +0.0930 |
| NEW HAMPSHIRE | 446,496 | 649,684 | +203,188 | 1.2614 | 1.1344 | -0.1269 |
| NEW JERSEY | 2,967,685 | 3,620,440 | +652,755 | 8.3842 | 6.3220 | -2.0621 |
| NEW MEXICO | 83,593 | 203,441 | +119,848 | 0.2361 | 0.3552 | +0.1191 |
| NEW YORK | 4,421,507 | 5,244,518 | +823,011 | 12.4915 | 9.1579 | -3.3335 |
| NORTH CAROLINA | 662,398 | 1,265,092 | +602,694 | 1.8713 | 2.2091 | +0.3378 |
| NORTH DAKOTA | 16,380 | 42,110 | +25,730 | 0.0462 | 0.0735 | +0.0273 |
| OHIO | 1,755,807 | 2,604,821 | +849,014 | 4.9604 | 4.5485 | -0.4118 |
| OKLAHOMA | 181,134 | 388,214 | +207,080 | 0.5117 | 0.6778 | +0.1661 |
| OREGON | 268,802 | 504,962 | +236,160 | 0.7594 | 0.8817 | +0.1223 |
| PENNSYLVANIA | 1,392,088 | 2,132,609 | +740,521 | 3.9329 | 3.7239 | -0.2089 |
| RHODE ISLAND | 266,297 | 298,600 | +32,303 | 0.7523 | 0.5214 | -0.2308 |
| SOUTH CAROLINA | 405,141 | 669,735 | +264,594 | 1.1445 | 1.1694 | +0.0249 |
| SOUTH DAKOTA | 81,619 | 156,072 | +74,453 | 0.2305 | 0.2725 | +0.0420 |
| TENNESSEE | 702,899 | 1,297,171 | +594,272 | 1.9858 | 2.2651 | +0.2793 |
| TEXAS | 1,583,415 | 3,354,003 | +1,770,588 | 4.4734 | 5.8567 | +1.3833 |
| UTAH | 161,104 | 494,676 | +333,572 | 0.4551 | 0.8638 | +0.4087 |
| VERMONT | 142,108 | 158,892 | +16,784 | 0.4014 | 0.2774 | -0.1239 |
| VIRGINIA | 796,807 | 1,125,168 | +328,361 | 2.2511 | 1.9647 | -0.2863 |
| WASHINGTON | 882,559 | 1,740,861 | +857,502 | 2.4933 | 3.0384 | +0.5451 |
| WEST VIRGINIA | 566,812 | 699,014 | +132,202 | 1.6013 | 1.2206 | -0.3806 |
| WISCONSIN | 1,181,696 | 1,691,885 | +510,189 | 3.3385 | 2.9543 | -0.3841 |
| WYOMING | 47,644 | 123,875 | +76,231 | 0.1346 | 0.2163 | +0.0817 |
| AMERICAN SAMOA | 29,717 | 48,820 | +19,103 | 0.0839 | 0.0852 | +0.0013 |
| GUAM | 10,973 | 31,194 | +20,221 | 0.0310 | 0.0544 | +0.0234 |
| MARIANAS GROUP | 24,080 | 41,471 | +17,382 | 0.0680 | 0.0724 | +0.0044 |
| PUERTO RICO | 441,096 | 710,792 | +269,696 | 1.2461 | 1.2411 | -0.0049 |
| PAC. TR. TERR. | 51,469 | 81,309 | +29,440 | 0.1465 | 0.1419 | -0.0045 |
| VIRGIN ISLANDS | 14,408 | 28,387 | +13,979 | 0.0407 | 0.0495 | +0.0088 |
| U.S. TOTALS | 35,395,929 | 57,267,292 | +21,871,363 | 100.0000 | 100.0000 | +0.0000 |

DECEMBER 31, 1982
TABLE 40

1982 NEEDS SURVEY

NUMBER OF EPA COST ASSESSMENTS BY CATEGORY

| STATE | TOTAL | CAT I | CAT IIA | CAT IIB | CAT IIIA | CAT IIIB | CAT IVA | CAT IVB | CAT V |
|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 1,085 | 244 | 102 | 3 | 136 | 7 | 278 | 315 | 0 |
| ALASKA | 388 | 199 | 8 | 0 | 4 | 1 | 72 | 110 | 2 |
| ARIZONA | 585 | 309 | 2 | 1 | 7 | 1 | 105 | 160 | 0 |
| ARKANSAS | 1,680 | 594 | 286 | 23 | 42 | 7 | 307 | 421 | 0 |
| CALIFORNIA | 2,918 | 1,070 | 34 | 10 | 35 | 22 | 708 | 1,034 | 5 |
| COLORADO | 513 | 166 | 10 | 0 | 27 | 3 | 30 | 264 | 4 |
| CONNECTICUT | 462 | 105 | 20 | 4 | 36 | 12 | 127 | 144 | 14 |
| DELAWARE | 91 | 15 | 6 | 0 | 5 | 4 | 24 | 32 | 5 |
| DIST. OF COLUM. | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| FLORIDA | 1,198 | 269 | 178 | 24 | 91 | 0 | 286 | 357 | 1 |
| GEORGIA | 1,259 | 263 | 130 | 2 | 163 | 4 | 288 | 401 | 8 |
| HAWAII | 110 | 32 | 0 | 0 | 0 | 1 | 37 | 40 | 0 |
| IDAHO | 516 | 152 | 10 | 3 | 35 | 3 | 108 | 191 | 14 |
| ILLINOIS | 1,456 | 416 | 208 | 0 | 208 | 18 | 227 | 304 | 75 |
| INDIANA | 1,441 | 339 | 237 | 1 | 76 | 5 | 263 | 398 | 130 |
| IOWA | 1,748 | 634 | 78 | 0 | 166 | 4 | 251 | 596 | 19 |
| KANSAS | 687 | 253 | 3 | 0 | 38 | 4 | 123 | 261 | 3 |
| KENTUCKY | 1,261 | 279 | 179 | 1 | 129 | 1 | 290 | 365 | 17 |
| LOUISIANA | 1,036 | 320 | 25 | 2 | 67 | 12 | 245 | 365 | 0 |
| MAINE | 694 | 152 | 12 | 3 | 36 | 9 | 212 | 209 | 61 |
| MARYLAND | 820 | 217 | 149 | 7 | 22 | 9 | 180 | 225 | 11 |
| MASSACHUSETTS | 524 | 78 | 25 | 6 | 33 | 15 | 169 | 165 | 33 |
| MICHIGAN | 1,721 | 278 | 79 | 7 | 97 | 20 | 301 | 347 | 92 |
| MINNESOTA | 1,241 | 513 | 82 | 21 | 128 | 6 | 179 | 315 | 17 |
| MISSISSIPPI | 1,618 | 435 | 249 | 3 | 140 | 2 | 342 | 447 | 0 |
| MISSOURI | 1,448 | 572 | 27 | 1 | 76 | 18 | 298 | 442 | 14 |
| MONTANA | 226 | 87 | 1 | 0 | 6 | 1 | 30 | 85 | 16 |
| NEBRASKA | 700 | 249 | 0 | 0 | 14 | 1 | 121 | 312 | 3 |
| NEVADA | 171 | 58 | 4 | 2 | 6 | 4 | 37 | 60 | 0 |
| NEW HAMPSHIRE | 454 | 103 | 7 | 3 | 17 | 13 | 145 | 144 | 22 |
| NEW JERSEY | 743 | 269 | 55 | 18 | 107 | 2 | 135 | 127 | 30 |
| NEW MEXICO | 356 | 128 | 2 | 0 | 0 | 2 | 98 | 126 | 0 |
| NEW YORK | 2,774 | 789 | 176 | 71 | 231 | 30 | 757 | 641 | 81 |
| NORTH CAROLINA | 1,970 | 461 | 291 | 104 | 181 | 2 | 448 | 482 | 1 |
| NORTH DAKOTA | 291 | 153 | 8 | 0 | 4 | 1 | 15 | 110 | 0 |
| OHIO | 2,355 | 470 | 431 | 70 | 182 | 14 | 445 | 623 | 120 |
| OKLAHOMA | 1,216 | 491 | 18 | 1 | 29 | 17 | 214 | 446 | 0 |
| OREGON | 580 | 102 | 51 | 3 | 59 | 11 | 114 | 228 | 12 |
| PENNSYLVANIA | 3,841 | 972 | 320 | 20 | 60 | 3 | 1,121 | 1,234 | 111 |
| RHODE ISLAND | 88 | 13 | 5 | 0 | 6 | 2 | 28 | 24 | 2 |
| SOUTH CAROLINA | 968 | 179 | 94 | 7 | 143 | 0 | 281 | 264 | 0 |
| SOUTH DAKOTA | 504 | 268 | 12 | 1 | 8 | 4 | 18 | 183 | 10 |
| TENNESSEE | 1,044 | 200 | 157 | 8 | 147 | 3 | 251 | 274 | 4 |
| TEXAS | 5,797 | 1,629 | 263 | 13 | 206 | 14 | 1,410 | 2,263 | 1 |
| UTAH | 640 | 144 | 138 | 0 | 22 | 0 | 116 | 287 | 1 |
| VERMONT | 246 | 39 | 26 | 1 | 13 | 7 | 70 | 68 | 31 |
| VIRGINIA | 1,187 | 432 | 58 | 19 | 47 | 5 | 274 | 340 | 12 |
| WASHINGTON | 918 | 201 | 7 | 3 | 45 | 10 | 233 | 379 | 32 |
| WEST VIRGINIA | 1,502 | 441 | 68 | 4 | 20 | 9 | 438 | 475 | 47 |
| WISCONSIN | 1,011 | 279 | 99 | 0 | 83 | 42 | 221 | 279 | 9 |
| WYOMING | 157 | 72 | 3 | 0 | 8 | 0 | 8 | 65 | 1 |
| AMERICAN SAMOA | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| GUAM | 12 | 3 | 0 | 0 | 2 | 1 | 2 | 4 | 0 |
| MARIANAS | 12 | 4 | 2 | 0 | 0 | 0 | 3 | 3 | 0 |
| PUERTO RICO | 117 | 26 | 5 | 0 | 21 | 1 | 32 | 31 | 1 |
| PAC. TR. TERR. | 72 | 29 | 3 | 0 | 0 | 0 | 28 | 20 | 0 |
| VIRGIN ISLANDS | 11 | 3 | 0 | 0 | 1 | 0 | 3 | 4 | 0 |
| U.S. TOTALS | 55,984 | 16,219 | 4,418 | 471 | 3,464 | 389 | 12,548 | 17,402 | 1,981 |

DECEMBER 31, 1982
TABLE 41

1982 NEEDS SURVEY

NUMBER OF FACILITIES EVALUATED IN INDEPENDENT STATE ASSESMENTS COMPARED TO EPA ASSESSMENTS

| STATE | TOTAL | CAT I | CAT IIA | CAT IIB | CAT IIIA | CAT IIIB | CAT IVA | CAT IVB | CAT V | CAT VI |
|---|---|---|---|---|---|---|---|---|---|---|
| CALIFORNIA | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TEXAS | 18 | 13 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| U.S. TOTALS | 19 | 13 | 2 | 0 | 1 | 0 | 0 | 3 | 0 | 0 |

DECEMBER 31, 1982
TABLE 42

1982 NEEDS SURVEY

PERCENT OF DOLLAR NEEDS
BY BASIS OF COST ESTIMATE AND BY STATE

| STATE | CODE 1 | CODE 2 | CODE 3 | CODE 4 | CODE 5 | CODE 6 | CODE 7 | CODE 8 | CODE 9 | CODE 10 | CODE 11 | CODE 12 | CODE 13 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALABAMA | 0.0 | 4.1 | 0.1 | 17.2 | 0.0 | 10.8 | 40.1 | 14.2 | 0.7 | 0.0 | 12.4 | 0.0 | 0.0 | 100.0 |
| ALASKA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 31.9 | 40.1 | 6.6 | 18.1 | 0.0 | 3.1 | 0.0 | 0.0 | 100.0 |
| ARIZONA | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 21.6 | 45.8 | 13.8 | 3.6 | 0.0 | 14.8 | 0.0 | 0.0 | 100.0 |
| ARKANSAS | 0.0 | 2.3 | 0.0 | 3.8 | 0.4 | 32.0 | 49.5 | 11.4 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 100.0 |
| CALIFORNIA | 0.0 | 0.2 | 0.3 | 0.0 | 0.0 | 21.2 | 43.9 | 9.2 | 24.3 | 0.0 | 0.4 | 0.0 | 0.0 | 100.0 |
| COLORADO | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 25.6 | 31.2 | 40.6 | 0.2 | 0.0 | 1.6 | 0.0 | 0.0 | 100.0 |
| CONNECTICUT | 0.0 | 0.6 | 0.1 | 0.3 | 0.0 | 30.5 | 13.7 | 15.2 | 0.6 | 0.0 | 0.3 | 38.3 | 0.0 | 100.0 |
| DELAWARE | 0.0 | 0.1 | 0.3 | 0.6 | 0.0 | 42.6 | 26.6 | 12.9 | 3.1 | 0.0 | 13.5 | 0.0 | 0.0 | 100.0 |
| DIST. OF COLUM. | 0.0 | 41.7 | 0.0 | 0.0 | 0.0 | 58.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| FLORIDA | 0.0 | 1.2 | 0.2 | 0.2 | 0.5 | 31.3 | 34.0 | 12.5 | 0.9 | 0.0 | 18.8 | 0.0 | 0.0 | 100.0 |
| GEORGIA | 0.0 | 4.4 | 0.8 | 6.0 | 0.0 | 40.5 | 28.4 | 10.1 | 2.0 | 0.0 | 7.4 | 0.0 | 0.0 | 100.0 |
| HAWAII | 0.0 | 0.0 | 0.0 | 2.0 | 0.9 | 22.5 | 55.9 | 0.4 | 10.1 | 0.0 | 7.9 | 0.0 | 0.0 | 100.0 |
| IDAHO | 0.0 | 0.1 | 0.0 | 0.3 | 0.0 | 40.3 | 43.1 | 6.2 | 0.3 | 0.0 | 9.3 | 0.0 | 0.0 | 100.0 |
| ILLINOIS | 0.0 | 1.8 | 3.3 | 1.9 | 0.0 | 65.5 | 8.3 | 14.5 | 3.8 | 0.0 | 0.5 | 0.0 | 0.0 | 100.0 |
| INDIANA | 0.0 | 1.8 | 0.8 | 1.6 | 0.0 | 26.9 | 42.2 | 13.0 | 3.7 | 0.0 | 9.4 | 0.0 | 0.0 | 100.0 |
| IOWA | 0.0 | 2.7 | 1.4 | 5.7 | 0.5 | 28.1 | 14.5 | 32.5 | 14.1 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| KANSAS | 0.0 | 5.6 | 0.0 | 1.9 | 0.0 | 38.0 | 20.8 | 7.5 | 19.2 | 0.0 | 6.5 | 0.0 | 0.0 | 100.0 |
| KENTUCKY | 0.0 | 4.0 | 0.3 | 7.4 | 0.2 | 28.2 | 30.0 | 17.6 | 0.2 | 0.0 | 11.6 | 0.0 | 0.0 | 100.0 |
| LOUISIANA | 0.0 | 1.9 | 1.9 | 3.8 | 0.0 | 32.2 | 26.7 | 32.7 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 100.0 |
| MAINE | 0.0 | 1.3 | 0.7 | 3.5 | 0.3 | 40.1 | 24.3 | 20.0 | 6.0 | 0.0 | 3.3 | 0.0 | 0.0 | 100.0 |
| MARYLAND | 0.0 | 0.9 | 0.2 | 0.6 | 5.2 | 7.4 | 26.9 | 6.0 | 25.1 | 0.0 | 27.2 | 0.0 | 0.0 | 100.0 |
| MASSACHUSETTS | 0.0 | 0.5 | 0.0 | 0.4 | 0.0 | 37.2 | 8.0 | 40.2 | 5.6 | 0.0 | 7.8 | 0.0 | 0.0 | 100.0 |
| MICHIGAN | 0.0 | 0.4 | 0.1 | 2.7 | 0.0 | 29.8 | 14.5 | 24.8 | 2.3 | 0.0 | 24.8 | 0.0 | 0.0 | 100.0 |
| MINNESOTA | 0.0 | 1.7 | 0.1 | 1.2 | 0.0 | 15.6 | 15.5 | 61.5 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| MISSISSIPPI | 0.0 | 4.5 | 0.2 | 0.0 | 0.0 | 21.7 | 30.1 | 33.0 | 1.3 | 0.0 | 8.9 | 0.0 | 0.0 | 100.0 |
| MISSOURI | 0.0 | 1.1 | 0.0 | 1.0 | 0.0 | 41.7 | 12.1 | 27.8 | 3.2 | 0.0 | 12.7 | 0.0 | 0.0 | 100.0 |
| MONTANA | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 59.0 | 17.3 | 19.5 | 0.4 | 0.0 | 1.6 | 0.0 | 0.0 | 100.0 |
| NEBRASKA | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 26.4 | 28.9 | 1.8 | 6.1 | 0.0 | 34.6 | 0.0 | 0.0 | 100.0 |
| NEVADA | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 47.5 | 34.9 | 11.3 | 1.4 | 0.0 | 4.4 | 0.0 | 0.0 | 100.0 |
| NEW HAMPSHIRE | 0.0 | 0.5 | 0.0 | 0.0 | 0.1 | 41.0 | 12.1 | 10.4 | 32.4 | 0.0 | 3.2 | 0.0 | 0.0 | 100.0 |
| NEW JERSEY | 0.0 | 2.2 | 1.1 | 22.8 | 0.0 | 41.1 | 21.9 | 6.6 | 2.2 | 0.0 | 1.6 | 0.0 | 0.0 | 100.0 |
| NEW MEXICO | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 44.5 | 31.8 | 22.2 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 100.0 |
| NEW YORK | 0.0 | 0.5 | 9.2 | 10.2 | 2.9 | 9.8 | 25.0 | 7.0 | 28.7 | 0.0 | 6.2 | 0.0 | 0.0 | 100.0 |
| NORTH CAROLINA | 0.0 | 4.6 | 0.0 | 2.2 | 0.5 | 44.5 | 26.1 | 9.5 | 1.6 | 0.0 | 10.4 | 0.0 | 0.0 | 100.0 |
| NORTH DAKOTA | 0.0 | 0.0 | 0.0 | 15.5 | 0.0 | 38.2 | 24.0 | 17.6 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| OHIO | 0.0 | 0.7 | 0.5 | 4.3 | 0.0 | 33.0 | 28.8 | 25.2 | 0.4 | 0.0 | 6.8 | 0.0 | 0.0 | 100.0 |
| OKLAHOMA | 0.0 | 1.5 | 0.8 | 3.7 | 0.8 | 15.4 | 42.8 | 20.5 | 2.8 | 0.0 | 13.0 | 0.0 | 0.0 | 100.0 |
| OREGON | 0.0 | 1.5 | 3.2 | 0.7 | 0.0 | 23.2 | 27.4 | 1.5 | 32.3 | 0.0 | 9.8 | 0.0 | 0.0 | 100.0 |
| PENNSYLVANIA | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 16.3 | 68.6 | 4.2 | 7.6 | 0.0 | 2.5 | 0.0 | 0.0 | 100.0 |
| RHODE ISLAND | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 75.4 | 11.0 | 1.5 | 10.9 | 0.0 | 0.4 | 0.0 | 0.0 | 100.0 |
| SOUTH CAROLINA | 0.0 | 6.7 | 0.1 | 0.0 | 0.0 | 35.9 | 37.1 | 6.8 | 7.6 | 0.0 | 5.4 | 0.0 | 0.0 | 100.0 |
| SOUTH DAKOTA | 0.0 | 0.9 | 0.0 | 7.4 | 0.0 | 58.6 | 17.3 | 0.7 | 2.0 | 0.0 | 20.8 | 0.0 | 0.0 | 100.0 |
| TENNESSEE | 0.0 | 6.2 | 0.1 | 3.7 | 0.0 | 49.5 | 26.2 | 8.1 | 2.6 | 0.0 | 3.3 | 0.0 | 0.0 | 100.0 |
| TEXAS | 0.0 | 1.4 | 1.9 | 0.1 | 0.0 | 22.2 | 23.1 | 19.4 | 0.9 | 0.0 | 2.0 | 28.5 | 0.0 | 100.0 |
| UTAH | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 58.9 | 27.8 | 3.4 | 0.3 | 0.0 | 8.8 | 0.0 | 0.0 | 100.0 |
| VERMONT | 0.0 | 0.5 | 0.3 | 5.5 | 5.5 | 49.2 | 22.9 | 12.3 | 3.2 | 0.0 | 0.2 | 0.0 | 0.0 | 100.0 |
| VIRGINIA | 0.0 | 0.5 | 0.0 | 2.0 | 0.5 | 33.7 | 50.6 | 1.5 | 4.3 | 0.0 | 6.5 | 0.0 | 0.0 | 100.0 |
| WASHINGTON | 0.0 | 5.4 | 0.2 | 2.0 | 0.0 | 33.9 | 24.2 | 13.6 | 17.6 | 0.0 | 0.7 | 0.0 | 0.0 | 100.0 |
| WEST VIRGINIA | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 41.8 | 54.9 | 2.4 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 100.0 |
| WISCONSIN | 0.0 | 0.4 | 2.4 | 7.1 | 0.0 | 63.6 | 15.6 | 7.5 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| WYOMING | 0.0 | 0.1 | 0.0 | 9.3 | 0.0 | 67.7 | 8.9 | 7.2 | 6.5 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| AMERICAN SAMOA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| GUAM | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.5 | 0.0 | 19.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| MARIANAS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 37.9 | 62.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| PUERTO RICO | 0.0 | 0.8 | 0.0 | 0.3 | 0.2 | 65.3 | 26.1 | 2.6 | 2.2 | 0.0 | 2.0 | 0.0 | 0.0 | 100.0 |
| PAC. TR. TERR. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.4 | 15.2 | 44.2 | 0.0 | 0.0 | 11.0 | 0.0 | 0.0 | 100.0 |
| VIRGIN ISLANDS | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 6.9 | 27.9 | 0.0 | 32.9 | 0.0 | 11.6 | 0.0 | 0.0 | 100.0 |

CODE 1 - STATE CERTIFICATION
CODE 2 - ANALYSIS COMPLETED
CODE 3 - EVALUATION SURVEY COMPLETED
CODE 4 - ENGINEER/CONSULTANT FIRM ESTIMATE
CODE 5 - COST OF PREVIOUS COMPARABLE CONSTRUCTION
CODE 6 - ENGINEER/CONSULTANT PRELIMINARY ESTIMATE
CODE 7 - EPA - SUPPLIED COST ESTIMATING PROCEDURES
CODE 8 - COST EFFECTIVE ANALYSIS
CODE 9 - OTHER PRELIMINARY ESTIMATES
CODE 10 - GRANT AWARD FULFILLS ALL NEEDS
CODE 11 - GRANT AWARD FULFILLS PARTIAL NEEDS
CODE 12 - STATE-SUPPLIED COST ESTIMATING PROCEDURES
CODE 13 - NONE GIVEN

DECEMBER 31, 1982
TABLE 43

1982 NEEDS SURVEY

PERCENT OF NATIONAL DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

| BASIS OF ESTIMATE | CAT I | CAT IIA | CAT IIB | CAT IIIA | CAT IIIB | CAT IVA | CAT IVB | TOTAL |
|---|---|---|---|---|---|---|---|---|
| STATE CERTIFICATION | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ANALYSIS COMPLETED | 0.0 | 0.0 | 0.0 | 46.2 | 2.2 | 0.0 | 0.0 | 1.6 |
| EVALUATION SURVEY COMPLETED | 0.0 | 0.0 | 0.0 | 17.5 | 23.1 | 0.0 | 0.0 | 1.9 |
| ENGINEER/CONSULTANT FIRM ESTIMATE | 8.2 | 2.5 | 9.7 | 2.7 | 0.5 | 0.5 | 3.5 | 4.3 |
| COST OF PREVIOUS COMPARABLE CONSTRUCTION | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 1.0 | 0.6 |
| ENGINEER/CONSULTANT PRELIMINARY ESTIMATE | 34.3 | 50.6 | 37.4 | 17.9 | 6.1 | 15.3 | 44.5 | 30.7 |
| EPA - SUPPLIED COST ESTIMATING PROCEDURES | 23.7 | 16.2 | 21.2 | 5.7 | 0.0 | 64.9 | 9.7 | 28.6 |
| COST EFFECTIVE ANALYSIS | 18.0 | 15.9 | 20.8 | 5.0 | 5.2 | 6.4 | 19.7 | 14.2 |
| OTHER PRELIMINARY ESTIMATES | 6.7 | 2.6 | 9.0 | 1.2 | 62.3 | 5.2 | 8.8 | 9.5 |
| GRANT AWARD FULFILLS ALL NEEDS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| GRANT AWARD FULFILLS PARTIAL NEEDS | 9.1 | 12.0 | 1.8 | 3.8 | 0.6 | 1.3 | 9.3 | 6.6 |
| STATE-SUPPLIED COST ESTIMATING PROCEDURES | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 3.6 | 2.0 |
| (NONE GIVEN) | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| U.S. TOTALS | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |